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**CHILD SURVIVAL IX:**



*Improving Maternal and Child Health Services  
in  
Morobe Province, Papua New Guinea*

FILE COPY

September 1, 1993 - August 31, 1996

**FINAL EVALUATION REPORT**

September 1996

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## LIST OF ACRONYMS

ADRA	Adventist Development and Relief Agency
AIDS	Acquired Immune Deficiency Syndrome
ALRI	Acute Lower Respiratory Infection
APO	Aide-Post Orderly
AusAID	Australian Agency for International Development
CHW	Community Health Worker
DHA	District Health Administrator
DIP	Detailed Implementation Plan
DOH	Department of Health
DPT	Diphtheria, Pertussis, Tetanus
HEP-B	Hepatitis-B
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
KPC	Knowledge, Practice, Coverage
MCH	Maternal and Child Health
MDOH	Morobe Department of Health
MP	Member of Parliament
NDOH	National Department of Health
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCI	Project Concern International
PDOH	Provincial Department of Health
PNG	Papua New Guinea
STD	Sexually Transmitted Disease
TBA	Traditional Birth Attendant
TOHP	Training of Health Promoters
TOT	Training of Trainers
TOT-VBA	Training of Trainers of Village Birth Attendants
TRC	Training Resources Center
TT	Tetanus Toxoid
USAID	United States Agency for International Development
VBA	Village Birth Attendant
WCH	Women's and Children's Health

## EXECUTIVE SUMMARY

USAID requires its PVO grantees to conduct a final evaluation, to assess achievement of objectives and provide recommendations for future activities. This report presents the results of the final evaluation of the PCI CS-IX Project in Papua New Guinea, which ended on August 31, 1996. The evaluation was conducted from July 25 to August 1, 1996. Results presented are quantitative and qualitative, and are based upon information obtained from project documents, interviews with PCI staff, Department of Health counterparts, NGO partners, community health workers and community leaders. A scope of work for the evaluation team can be found in Appendix 1.

Morobe Province is large with much of the project area remote and difficult to reach in the limited period of time allocated for this evaluation. This evaluation was conducted during the height of the rainy season which made travel to the project sites more difficult than normal. In addition, the security situation in the CS-IX project area, while somewhat improved in the past few years, nevertheless continues to restrict the movement of outsiders. Despite these difficulties, the evaluation team is satisfied that a complete review of the project was achieved.

Part I of this report focusses on project accomplishments and lessons learned, and is organized into sections, corresponding to the major CS-IX project components: village birth attendant training, men's health education, training of health promoters, and the health training resources center. Reviewing each of these four components, the evaluation team found that the CS-IX project's most significant achievements were in the area of VBA training which has now, as a result, become a nationwide program. In addition, the evaluation team was impressed by the progress achieved in the area of men's health education and the training of HIV/AIDS health promoters. The former has played a key role in the sustainability of the VBA program while the latter has enabled local community leaders, particularly in the urban Lae area, to play an expanded role in protecting the health of their communities. The health training resources center has facilitated VBA training, men's health education and training of health promoters and, in the opinion of this evaluation team, deserves continued funding.

Part II addresses the issue of project sustainability with particular attention to community participation, collaboration with NGOs, and capacity of counterpart institutions. The evaluation team found that the CS-IX project has generated significant levels of community participation as demonstrated in the activities of both VBAs and health promoters. The men's health education component has been a key element of this success. The CS-IX project has collaborated extensively with NGOs and also with the private sector. This collaboration will assist greatly with the prospects for sustainability of the project's activities. The project has also clearly enhanced the capacity of PCI's counterpart, the Department of Health at Provincial, District and Health Center levels. The continued funding of DOH staff to train and monitor VBA activities is a clear indicator of sustainability.

Part III discusses the impact of the CS-IX Project according to the results of two final surveys designed to measure thirteen quantitative indicators. The evaluation team was highly impressed with the methodology used for the final surveys as well as the process of data collection, tabulation and analysis. The evaluation team was, however, concerned that the baseline data

used to set the indicator objectives may have resulted in overly ambitious objectives during preparation of the project's detailed implementation plan (DIP). In reviewing the results of the final KPC and HIV/AIDS Surveys, the evaluation team found that the CS-IX project had achieved or nearly achieved most of the thirteen indicator objectives as put forth in the DIP. This is a remarkable achievement given the political and societal upheaval in Papua New Guinea and, in particular, in local, Morobe society over the three years of the project.

The evaluation team consisted of an external evaluation consultant/team leader from the University of Papua New Guinea's Faculty of Health Sciences, a representative of the Morobe Province Department of Health and PCI's Country Director for Papua New Guinea. Comments from the Department of Health team member and PCI/PNG staff were incorporated into this final report, which has been distributed to PCI, USAID, the DOH, and other interested parties.

## **PART I. PROJECT ACCOMPLISHMENTS AND LESSONS LEARNED**

### **A. Village Birth Attendant Training**

#### Background

From its inception, the core of PCI's Child Survival program in Papua New Guinea was the training of local women to serve as village birth attendants. The goal of the program has been to address the high maternal and child mortality rates in Morobe Province and to develop a model for community health which addresses the unique problems of women in Papua New Guinea. Due to local beliefs, including taboos related to women's blood, pregnant women in rural communities deliver their babies unassisted by a traditional birth attendant (TBA). Unlike in other traditional societies where PCI has focused on improving the skills of TBAs as a logical first step toward improving maternal and child survival, in Papua New Guinea it was realized that the very institution of village birth attendant would need to be developed before significant improvements in maternal health could take place.

Learning from the experiences of researchers, mission groups, the Department of Health, and other international health organizations, PCI began in 1987 to develop a model program for training and supervising village birth attendants (VBAs). Tested and refined over the past decade, the major elements of this model are a three-phase community preparation process, a culturally-sensitive adult education curriculum, concurrent health education activities for village men, continual involvement of DOH staff at all levels, frequent in-service training for VBAs, and on-going supervision of VBA activities by health center staff. The VBA training manual has now been translated by Anne Kitoneka, PCI Provincial Training Coordinator, and is now ready to be printed and distributed on a wider basis.

During the early years of PCI's program in Papua New Guinea, considerable experimentation took place and it was decided that the best approach to VBA training was for PCI staff to play an active role in both the training and supervision of VBAs. The geographic location of PCI's activities were concentrated on a limited number of villages in the area around Mutzing Health Center in Kaiapit District. During CS-IX, by which time the VBA model had been sufficiently tested and proven a success, PCI shifted its role away from direct training of village women as VBAs to that of a trainer of VBA trainers and provider of technical assistance and limited financial support to the health centers which had assumed primary responsibility for training and supervising VBAs. It was decided that the potential reduction in quality of VBA training would be more than offset by the expanded scope and reduced cost of the program. In reviewing the project design and the outcome of the changes made for CS-IX, the evaluation team believes that this was a wise decision.

Because of the important role VBAs can play in extending health care services to the village level in PNG, as well as the central place of VBA training in the PCI project, the final evaluation team focused much of its attention on this component. The team attempted to determine which of PCI's strategies have worked and which have not, and has made recommendations for future VBA training activities being planned for funding under AusAID's new five-year Women's and Children's Health Project, scheduled to begin in late 1996.

## Accomplishments

During the CS-IX Project, PCI, in collaboration with the Morobe Provincial Department of Health, conducted seven trainings of trainers of VBAs (TOT-VBA) in which 80 VBA trainers were trained, 50 from Government and Lutheran Health Services within Morobe province, 14 from Bogia District in Madang Province, and an additional 16 from four other provinces. The number of trainings exceed DIP activity targets by two (five had been planned). The number of VBA trainers trained was 267% of the DIP activity target (target=30, realization=80). Development of the TOT-VBA training manual and curriculum was one of the major achievements of CS-IX. The TOT-VBA, originally designed for two weeks was, at the suggestion of the First Secretary for Health, extended to three weeks. As a result of this one-week extension, more attention was given to practicing newly-learned training skills, and also to the development of a follow-up strategy, including plans for the first training of VBAs within six months of the completion of the TOT-VBA.

The VBA training program and materials were developed during the CS-VI project. The course and materials are specifically designed for illiterate village women. The CS-IX project resulted in the training of 190 VBAs during 11 two-week trainings in six districts of Morobe Province. Five of these training courses were conducted by PCI staff. The remaining were conducted by PCI-trained VBA trainers with financial and technical assistance from the CS-IX project. Each VBA training course costs about K3,000 (\$2,400) to conduct. Four two-day VBA in-service trainings were conducted with 60 participants attending. Each in-serve training cost about K1,000 (\$800) to conduct.

PCI's successful VBA training program has had a major impact on maternal and child health programs throughout PNG. In part as a result of PCI's ability to expand the VBA program without suffering lapses in quality, the new National Health Policy adopted in 1996 included as one of its objectives "to increase the number of supervised deliveries from 31% to 50% by the year 2000." One of the core strategies selected to achieve this objective is to:

"Promote and encourage appropriate involvement of health workers in delivery of maternal health services [and] expand Village Birth Attendants programs to rural areas in all provinces." (National Health Policy, p. 42).

VBA training has also been included as a major activity under the community health component of the AusAID-funded, national WCH project, which will begin in late-1996.

Other major accomplishments of the VBA component are:

- \* Most of the trained VBAs seemed to be actively involved in assisting mothers in their villages. Evidence of this continued involvement was provided by Mutzing health center staff and the group of VBAs who were interviewed by the evaluation team. An exact determination of the number of active VBAs was beyond the limited scope of the evaluation.

- \* A VBA liability form was developed and implemented beginning in June 1995. The VBA liability form is a means of protecting VBAs from liability for maternal or infant deaths, one of the major obstacles to convincing husbands to allow their wives to become VBAs. A recommendation of the mid-term evaluation team in May 1995, the VBA liability form was taken to be signed in all villages where VBAs had been trained prior to May 1995.

### Recommendations

1. The Morobe Government should budget and make funds available for a sustainable VBA program. The Assistant Secretary of the MOD should continue to encourage district secretaries and local government councils, under the local government reforms, to budget for VBA training and men's health education programs, and for district health staff to implement them.
2. The Morobe Province Department of Health should encourage local volunteer organizations to support VBAs by providing limited quantities of equipment and supplies for VBA use. These could include essential VBA kit supplies such as soap, gloves, buckets, string and razor blades.
3. The National Department of Health should consider the option of Morobe becoming the National VBA Training Center, in view of the success of the program to date, and the good level of community acceptance and support.
4. The National Department of Health should support the printing of a limited number of VBA training manuals which have been promoted through the efforts of PCI. This should include printing of the pidgin version of the VBA training manual which can then be made available for reference by VBAs on a nationwide level.
5. The individuals trained as VBA trainers need to be selected based on explicit criteria and with an eye towards the role they will play in training VBAs and/or conducting the men's health education courses.
6. The National Department of Health should review and standardize the health information system providing feedback on courses and VBA.
7. The DOH should develop rules for hand over of VBA supervision responsibilities when DOH staff are transferred. Even more so than regular health center staff, movements of VBA supervisors should be limited as much as possible.
8. Community preparation activities, i.e., the three contact process, are an integral part of the VBA training process and should be implemented by members of the same team that will conduct the VBA training and men's health education.
9. The idea of picture identity cards for VBAs, to help improve their recognition at health centers and hospitals, needs to be fully implemented. VBA supervisors also need to take

a more active role in introducing newly-trained VBAs to the hospital and health center staff, particularly if the current high turnover rate among health staff continues.

10. The issue of VBA allowances should be addressed by the newly formed local government councils which are currently being formed. Traditional gift reward system should be encouraged to compensate VBAs for services rendered. Cash allowances could be provided for specific costs incurred by the VBA, e.g., replenishment of supplies or the cost of transport when accompanying a pregnant woman to the health center.
11. Aide-Post Orderlies (APOs) and Community Health Workers (CHWs) should attend the VBA training for VBAs who will work in their area. As many health center staff as possible should be involved in the VBA training so as to maximize cooperation and understanding.
12. The National DOH should further develop the idea of a VBA supervision checklist, as proposed by the mid-term evaluation team, for use as a supervision tool by the health center staff person assigned specifically to supervise and support VBAs.

## **B. Men's Health Education**

### Background

Men's health education courses were developed as a component of CS-VI in order to maximize support for the VBA program in the community. Every VBA course is accompanied by a course for village men at about the same time. The courses are designed to better inform village men about reproductive health and the importance of VBAs. As the principal decision-makers in the household, men have substantial control over access to health services, such as a decision to go to a health center.

Men's health education is an excellent complement to VBA training, and represents an integral part of the project. Husbands of VBAs are encouraged to attend, but the training is open to any men who are interested. The target of the project was to have male participants from each village having a VBA trainee. In reality, however, this did not occur and participants in the men's courses were frequently chosen from villages located close to the VBA training site. Men's health education courses are 2-3 days in length. There have been many requests to extend them and to cover more material.

### Accomplishments

Men's health education is seen as important for cultivating support for VBAs among the men in the villages. There is much enthusiasm for these courses in the village among both village men, who have expressed a desire to learn more about reproductive health, and village women, who attribute the change in men's attitudes to the men's health education. This course has the potential to significantly improve the antenatal attendance, immunization coverage and early referral of problem deliveries.

## Recommendations

1. Local community leaders should be encouraged to take an active role in men's health education issues. Support for this should be encouraged by the Morobe Government which could seek coordination of these efforts by the Department of Youth and Home Affairs. This department could liaise with other organizations including the Department of Health.
2. No village women should be trained unless at least one male leader from her village, preferably her husband, is a participant at the men's health education course held in conjunction with the VBA training.
3. All health centers in the CS-IX project area had a male CHW who attended a TOT-VBA course. In most cases, however, the male CHW was not trained specifically to conduct the men's health education sessions. A male health center staff member should be specifically trained to plan and implement the men's health education program.
4. One individual within the health center, preferably male, should be given specific responsibility to plan and implement men's health education sessions. In addition to the formal courses conducted in conjunction with the VBA training, health center staff should provide health education "talks" to village men during community preparation or during mobile MCH patrols.
5. Because the men's health education sessions are designed to last only 2-3 days, it is feasible to conduct more than one session during the course of the two-week VBA training.
6. Training materials for the men's health education program should be improved with sufficient copies produced to enable the VBA trainers and men's educators to have their own materials.

## **C. Training of Health Promoters**

### Background

The training of health promoters (TOHP) is a five-day course provided to selected leaders of community-based groups such as women's or youth clubs, churches, schools and health committees. The course is designed to prepare these leaders to become active health educators and promoters in their villages. Participants at TOHP courses conducted to date have also included trained VBAs living nearby. In this way they, too, have been able to benefit from the information presented, and can potentially pass this information onto the mothers they help.

The mid-term evaluation of the CS-IX project, conducted in May 1995, recommended that

"before conducting any further TOHP courses, PCI should carefully assess the effectiveness of the TOHP program, on a pilot basis. Staff should attend the health

education talks of a sample of promoters and evaluate their abilities and the quality of the information presented, before making a decision to proceed with further training. If the results are good, the program should be continued. If the results are poor, then the TOHP strategy should be changed.”

The mid-term evaluation team also found that, in many ways, the TOHP program duplicated the efforts of the national Child Survival Crash Program’s TOT program, one activity of which was to train health promoters in five key child survival interventions: immunization, control of diarrheal disease, management of acute respiratory infections, nutrition, and family planning. It was recommended that the CS-IX Project could make a greater impact by training HIV/AIDS-specific health promoters, an activity no other provincial or national program was currently undertaking.

As a result of the mid-term evaluation team’s recommendation, an internal assessment was undertaken to determine the efficacy of the training of health promoters component, specifically focusing on HIV/AIDS health promoters in both urban and rural areas. Interviews were conducted with a randomly-selected sample of health promoters to determine their activities since being trained. Written tests identical to the pre- and post-test were given during the training of health promoters. The outcome of the assessment was that more than half of the health promoters were still active and providing HIV/AIDS prevention to their communities. Particularly active, were church pastors and youth leaders. Levels of knowledge were still quite high among the health promoters, but it was clear that some slippage had occurred. As a result, it was decided that refresher training would be provided to previously trained health promoters and, during future trainings of health promoters, they would also be invited to assist in training and supervising the new health promoters.

The target population was urban settlers and rural villagers in Huon District, and rural villagers in Kaiapit District, particularly along the Highlands Highway. During implementation, project management chose to emphasize the urban settlements over the rural villages due to the perception that behaviors in the urban settlements could contribute to rapid spread of HIV. Evidence of higher STD rates in the urban settlement areas seemed to confirm this perception.

The approach of the project was to train health promoters recruited from communities. The length of each training was five days and the location was a church, school or local community center. Those trained included church pastors and elders, political leaders, business managers, youth group directors, and teachers. Originally designed to be completed in two days, the length of the training was increased in order to provide more opportunity for health promoters to practice their presentations. A visit to a local health facility and/or community center was included for this purpose.

After the training, each trained health promoter conducted health education sessions for the members of the group s/he headed. The Health Training Resources Center (TRC), founded by PCI and now managed by the Morobe Department of Health, provided free educational materials such as brochures, pamphlets, flip charts, and condoms for use by the health promoters as needed. The TRC also owns two video cassette recorders and television screens for use by health promoters. PCI staff provided technical support and refresher training for health promoters after

the initial training. There has also been talk among the more active health promoters of forming a local HIV/AIDS education organization. The former PCI staff, now managing the TRC under the auspices of the Morobe Department of Health, are continuing to promote this idea.

### Accomplishments

PCI has made a significant contribution to awareness and knowledge about HIV/AIDS in Morobe Province. PCI has conducted 15 trainings of HIV/AIDS health promoters during the CS-IX project. A total of 316 HIV/AIDS health promoters from settlements and villages in Lae and the surrounding areas were trained.

The TOHP-HIV/AIDS component has many demonstrable strengths. The AIDS flip chart is visually clear, helpful and well-utilized by the trainers. The health promoters selected for training are community leaders. PCI staff have followed up the TOHP in many ways, for instance, by attending the promoters' first health education talks, by periodically assessing the quality of the health promoter's activities, the retention of the health promoter's HIV/AIDS knowledge, and additional in-service training, on both a formal and informal basis. Periodic evaluation and revision of the TOHP curriculum has resulted in a more thorough process of training. In June 1995, the TOHP curriculum was expanded to five days, a recommendation of the mid-term evaluation which had been echoed by TOHP participants and trainers.

Monitoring the educational activities of trained health promoters, particularly in the rural areas, is a key to the long-term sustainability of the program. Also, in the rural areas, health center staff and local health workers (Aide-Post Orderlies, Community Health Workers) have not, in some cases, been sufficiently involved. In the urban Lae area, this does not seem to be an issue as local health center staff have fully participated in both the training of health promoters and follow-up activities. For instance, one of the key activities of the expanded five-day training has been trips to urban health centers during which trainees are provided an opportunity to practice providing HIV/AIDS information to patients and staff.

The future of the HIV/AIDS health promoters program in Morobe is promising. Funding has been obtained to continue the supervision and support activities of former PCI staff under the auspices of the Morobe Primary Health Project. This includes K4,000 (\$3,200) from the local MP and K10,000 (\$7,500) from the Department of Religion, Home Affairs and Youth. In addition, the WHO representative in Port Moresby expressed his intention to provide an additional K4,000 (\$3,000) for training, with the assurance that the funding would be used to implement activities not duplicating those previously conducted by PCI or currently being undertaken by the Lae city local government.

### Recommendations

1. Better coordination of this important activity should be sought, perhaps through a joint Morobe Government/NGO coordinating body. The Education Department, the churches, and other community-based organizations should be involved and their programs supported by financial assistance by an external donor. Those already involved in this

field should be encouraged by the government and planning and funding to support their continued activity provided.

2. The WHO should provide additional funding to complete training of health promoters in the five urban settlements not covered by the CS-IX project.
3. WHO and other donors should consider ways to integrate HIV/AIDS and STD into all programs designed to improve women's health in the rural areas. An example is the new AusAID-funded Women's and Children's Health Project which includes training of Village Birth Attendants, an excellent vehicle for providing HIV/AIDS education to rural women.
4. WHO and other donors should provide, whenever possible, financial support for the printing of additional educational materials (brochures, posters, flipcharts) and reproduction of video cassettes which the Training Resources Center will need if it is to continue supporting previously trained HIV/AIDS health promoters.
5. The AusAID-funded national HIV/AIDS/STD Project should collaborate with the Training Resources Center and learn from the experiences of CS-IX in training and monitoring HIV/AIDS health promoters.
6. The Lae World AIDS Day Committee, composed mostly of NGO representatives should continue to operate as a "de facto" Provincial AIDS Committee until such time as Morobe Province has a fully-funded, operational AIDS Committee. The TRC should continue to operate as a gathering place for NGO AIDS activists and to provide materials to HIV/AIDS health promoters in the Lae urban area.

#### **D. Health Training Resources Center**

##### Background

The Training Resources Center (TRC) was established by PCI as a venue for the training of VBA trainers and other training activities. It was expected that TRC staff would design and/or adapt existing IEC materials related to maternal and child health and HIV/AIDS for use in implementing CS-IX training activities, and to serve as a clearinghouse for these and other health education materials. To achieve this objective the TRC was equipped with audio-visual and other equipment including two televisions, two video cassette recorders, two overhead projectors, a slide projector, a diesel generator, a photocopy machine, two pelvic models, eight folding tables and 16 folding chairs.

In reality, the practical value of the TRC has been twofold: (1) to serve as meeting place for church groups, health center staff, and other NGOs active in health, and (2) to serve as a clearinghouse for health education materials. PCI-trained health promoters, particularly those concerned about HIV/AIDS in the urban Lae area, have frequently borrowed videos to show to their respective groups. Conveniently located adjacent to the main bus terminal in central Lae, the TRC is an easy place for health promoters or VBAs to drop in if they need assistance or are in need of a new supply of brochures, posters, etc.

The TRC has developed some materials related to HIV/AIDS and also an improved chart for training VBAs about the warning signs of high-risk pregnancies. In general, however, PCI chose to take advantage of IEC materials developed by other organizations such as the national Child Survival Support Program, the South Pacific Commission and the Adventist Development Relief Agency (ADRA). At the recommendation of the mid-term evaluation team, the TRC coordinator and her assistant traveled to Port Moresby in July 1995 to review materials available in the National Department of Health's IEC section. Discovering the existence of many materials not previously available in Morobe Province (due to the NDOH's lack of a shipping budget), it was arranged to have IEC materials shipped to the TRC and from there distributed to health centers throughout Morobe Province.

### Recommendations

1. Donors involved in MCH programs in Papua New Guinea should consider the support of additional training resources centers modeled on the Lae center. The Lae TRC should be developed into a national VBA training resources center with a mission to develop additional TRCs in other locations.
2. The TRC's new location is in a more spacious location in the same building as the CS-IX project office. More spacious than the previous location, the TRC has sufficient room for conducting training activities with up to 15 participants. Future trainings could be held in the new TRC without the space and noise problems which plagued training activities at the TRC during the CS-IX project.
3. In the long run, renting space for the TRC is not sustainable and the TRC manager should consider raising funds from local businesses to construct a permanent site for the center. At the very least, TRC management should consider renting space in a less costly location.

## **PART II. PROJECT SUSTAINABILITY**

### Background

The level of acceptance of PCI's work in Papua New Guinea is high. The VBA, TOT-VBA, and training of community leaders as health promoters has established PCI's reputation in the community. The local health team, including the former PCI personnel at the Training Resources Center, wish to continue the work which has been established. The need for funding is paramount and it appears that the Department of Morobe, through the Local Government Councils, will continue to support the VBA program and the Training Resources Center. It is less clear who will support health promotion and health education, especially at the district and settlement level in the city of Lae. The NGOs will probably continue as before with printed materials, however, a major donor needs to support local community leaders in ensuring the continuation of health promotion and health education activities. The most likely major donor is AusAID which has multi-year family planning and HIV/AIDS projects in Papua New Guinea which include funding for local NGOs, and is planning to begin a new 5-year women and children's health project before the end of 1996.

### Community Participation

Community preparation has been a key element of achieving community participation and thus long-term sustainability for the CS-IX project. A formal process of three contacts with the community has been an effective methodology for achieving community support prior to and during VBA training. Men's health education, a means of ensuring that male community leaders and, in particular, the VBA's husband understand and support the role of the VBA, is another community-based activity contributing to project sustainability. Meanwhile, in both urban and rural areas, community leaders have been trained as HIV/AIDS health promoters. Particularly active have been church leaders, several of whom have committed resources for additional training of HIV/AIDS health promoters.

In the long term, increased community participation will be necessary if VBAs are to continue their work. Financial support for the VBAs, in the form of a transport allowance to cover the cost of accompanying a pregnant woman to the health center, and a replenishment of the VBA's supplies, will also be required of the local community. Local council government, introduced as part of the national constitutional reforms in late 1995, will be the key decision-maker in regards to financial support for VBAs. When asked about the need for payment, the group of active VBAs interviewed by the evaluation team overwhelmingly responded that their needs were limited to transport costs and supplies.

### Collaboration with NGOs and the Private Sector

PCI has collaborated with many other organizations in the non-governmental sector, both non-profit organizations and for-profit businesses. The World AIDS Day Committee, a de facto provincial AIDS committee was attended by representatives of NGOs and other non-governmental groups concerned about HIV/AIDS. Also attending these meetings and supporting

AIDS awareness activities was the head of the Department of Education's adult education program.

PCI and its NGO partners have collaborated in different ways depending on each organization's particular strengths. ADRA, for instance, is particularly strong in the area of IEC materials development, and supplied the local HIV/AIDS education efforts with many of the brochures, videos, and training materials used by the CS-IX project. World Vision International, which also shared space with PCI, focused its educational efforts on two particularly large settlement areas in the Lae area. World Vision's project director participated in the CS-IX final survey and was particularly helpful in obtaining access to the settlement areas in which it was active. Local service organizations, such as the Soroptomists, Rotary and Lions/Lioness Clubs provided financial and logistical support, and volunteers to help with implementation of World AIDS Day activities. Local business houses donated more than \$25,000 in food, supplies and equipment which significantly lowered the costs of conducting trainings and workshops.

The following table summarizes the CS-IX project's collaborative efforts with local non-governmental agencies.

Non-Governmental Organizations (NGOs)	World Vision International Lutheran Medical Services ADRA International Lae City Health and Social Services	
Local Service Organizations	Rotary Club of Lae Soroptomists International of Lae Lions/Lioness Clubs of Lae	
Business Houses in the Lae Area:	Brian Bell Colgate Palmolive Lae Fish Cannery Tolec Electronic Lae Biscuit Company T.P.M.C. BHP Steel & Building PNG Stationers	Ramu Sugar Steamship Joint Venture Nestle Niu Gini Oil Services Rabaul Trading Company ICI Dulux Boral Gas

Capacity of Counterpart Institutions

The major innovation in the design of the CS-IX Project was the adoption of a more conscious strategy to increase the capacity of PCI's counterpart institutions. The mid-term evaluation of the CS-VI project praised the quality but questioned the sustainability of PCI's direct training of VBAs and urged the greater involvement of District DOH and Health Center staff. As a result, the CS-IX project design emphasized a Training of Trainers approach designed to transfer responsibility for direct training and supervision of VBAs to the Health Center. This new approach was directed not only towards building the capacity of the local health center staff in Kaiapit and Huon districts but also towards expanding the benefits of the project to the other eight districts of Morobe Province and beyond. As a result of the CS-IX project, there are now

VBA trainers in every district of Morobe Province as well as five other provinces.

The capacity of the Department of Health in Morobe province to train and supervise VBAs and other volunteer health workers has clearly been enhanced by this project. This was clearly stated during interviews with the Kaiapit District Health Administrator (DHA) and the Mutzing Health Center's Sister-in-Charge. The two most recent VBA trainings conducted in Kaiapit District were implemented entirely by the Health Center staff, who had been trained during the first Training of Trainers of VBAs conducted by CS-IX. The need for the full-time PCI staff member who had been posted to Mutzing for most of the CS-IX project was also questioned by the DHA and the Sister-in-Charge. This person was reassigned to work on other project activities in December 1995. In retrospect, the evaluation team feels that PCI should have acted more quickly in reassigning its staff person whose skill would have been useful in Huon and other districts where health staff had only recently been trained as VBA trainers.

Another indication of increased capacity of the Department of Health was the creation of fully-funded Health Education and Training Coordinators in Huon and Kaiapit Districts. One of these positions, in Huon District, is now held by one of PCI's former district training officers. The individual to fill the position in Kaiapit District is still to be recruited and the responsibility for supervising VBAs is still held by the Sister-in-Charge.

Sustainability Plan, Objectives, Steps Taken, and Outcomes

Sustainability Objectives	Steps Taken to Date	Outcomes
1. Training Resources Center established with continued funding (collateral and government)	TRC was established by the project and funding obtained from PDOH , local businesses and service clubs (See Section I.D above). Additional funding pending from AusAID and WHO.	TRC is recognized as a valuable resource, particularly for VBA training and HIV/AIDS education and is receiving financial support from both local government and donors.
2. Health centers training VBAs without direct PCI assistance	Mutzing Health has trained and supervised VBAs without PCI's assistance since 1995. Huon District has hired ex-PCI staff trainer to train and monitor VBAs in Huon District's.	Capacity and commitment to training VBAs clearly exists at all levels of the health system in Morobe Province. The AusAID WCH project is planning to fund additional VBA training from 1997.
3. Number of VBAs actively working in the community	CS-IX attempted to monitor the number of VBAs actively working in the community but found this difficult to do on a regular, systematic basis due to distance and isolation of many VBAs. PCI has encouraged the DOH to include this as part of its information system to be implemented in late 1996.	Anecdotal evidence indicates that VBAs continue to be active in Kaiapit District. Due to the lack of a reliable reporting system, however, there is no way to determine the exact percentage of VBAs active.
4. Government funding for health center staff to carry out VBA training and supervision	An estimated \$50,000 in funding for VBA training and supervision has been provided by national, provincial, & district governments.	The Government of PNG at all levels is now committed to supporting VBA training and supervision.
5. Establishment of District Health Management Teams with	This concept was initiated by PCI, but put on hold until final outcome	Under the national political reform, the districts will be the key political

<b>Sustainability Objectives</b>	<b>Steps Taken to Date</b>	<b>Outcomes</b>
institutionalization of HIS for monitoring	of national political reform is apparent.	and administrative unit. As a result, the District Health Management Teams are likely to become a reality in the future.
6. Change of government policy on TT immunization to cover all women of child-bearing age	CS-IX has encouraged this change in national policy but it was not included in the new national health plan (1996-2000).	This sustainability objective was not realized.
7. Policy for national use of TT (life-time) card for women	CS-IX encouraged the printing of Women's Health Record Book, including a TT lifetime record.	This sustainability objective was not realized.
8. VBAs distributing "Mothers Health Book"	VBA training curriculum revised to include distribution of Women's Health Record Book. Added to in-service, refresher training for active VBAs as well.	The National DOH printed and began distributing Women's Health Record Books in 1995. VBAs in Morobe Province are now distributing or assisting selected health centers to distribute Women's Health Record Books .
9. Functioning Provincial AIDS Committee	NGO members meet frequently to plan World's AIDS Day activities and to discuss AIDS prevention efforts in general. Official Provincial AIDS committee has not functioned.	Informal network of NGOs and community AIDS activists fostered by PCI and the CS-IX project. Training Resources Center has played a major role in fostering this collaboration.
10. Funds for TRC from donor groups for continued health education activities in HIV/AIDS	TRC has been functioning since April 1996 with funding from PDOH , local businesses and service clubs . Additional funding requests are pending at AusAID and WHO.	In the short-term, the TRC will continue operating with funds from various donors.
11. Marketable HIV/AIDS health education "package" for use in seminars by private companies, church groups, and community agencies	HIV/AIDS materials were developed, but plans for a marketable package were not pursued. Local businesses have requested assistance from the TRC and may purchase its services.	Potential exists but, to date, this objective has not been realized.

### PART III. REALIZATION OF DIP OBJECTIVES

#### Background

The evaluation team was highly impressed with the methodology used for the final surveys as well as the process of data collection, tabulation and analysis. The quality of the final surveys can be attributed to the technical assistance provided by PCI's Headquarters-based Technical Support Officer who had been earlier trained in survey methodology by the Child Survival Support Program at Johns Hopkins University. The evaluation team was, however, concerned that the baseline data used to set the DIP indicator objectives, carried out in a series of less rigorous surveys during the CS-VI project and at the beginning of the CS-IX project, may have resulted in overly ambitious impact objectives for this project. Any weakness that PCI/PNG may have had in conducting quantitative surveys was clearly overcome during the CS-IX project, and the evaluation team is confident about the validity of the final survey results.

#### Summary of Accomplishments

In reviewing the results of the final KPC and HIV/AIDS Surveys, the evaluation team found that the CS-IX project had achieved or nearly achieved most of the thirteen indicator objectives as put forth in the Detailed Implementation Plan. This is a remarkable achievement given the political and societal upheaval in Papua New Guinea and, in particular, in local, Morobe society over the three years of the project. The final survey results (summarized below) show the project to have achieved or nearly achieved its quantitative impact objectives in the areas of safe delivery, antenatal care, contraceptive use, ORT use, weaning practices, antenatal maternal nutrition, and HIV/AIDS knowledge. The only serious shortfalls were in the areas of knowledge about diarrhea and ALRI, and in immunization coverage among children aged 12-23 months.

A complete report on both final surveys can be found in Appendix 6.

DIP Indicator Objective	Target	Realization
1. Proportion of children 12-23 months fully immunized by 12 months of age.	60%	25%
2. Proportion of mothers of children under 2 years who most recent delivery was fully protected against tetanus.	70%	54%
3. ORT use rate for children under 2 years.	60%	57%
4. Proportion of mothers who know when to bring their children with diarrhea to a health facility.	50%	27%
5. Proportion of mothers with children under 2 years who know proper weaning practices.	40%	39%
6. Proportion of women who know to eat a (a) greater quantity of food, especially foods containing (b) protein and (c) iron, during pregnancy.	60%	46% (a) 54% (b) 92% (c)
7. Proportion of deliveries assisted by trained health worker.	50% (Kaiapit) 65% (Huon)	47% (overall)
8. Proportion of mothers who know to start antenatal care	50% (Kaiapit)	42% (overall)

DIP Indicator Objective	Target	Realization
during the first trimester.	60% (Huon)	
9. Proportion of mothers who had at least two antenatal visits during their last pregnancy.	85%	15% (card) 63% (recall)
10. Proportion of women who are using modern contraceptives.	10%	34%
11. Proportion of mothers with children under 2 years who know proper recognition of ALRI	60%	17%
12. Proportion of men and women 15-45 years of age who know how HIV is transmitted.	50% (Urban) 35% (Rural)	42% (Urban) 26% (Rural)
13. Proportion of men and women 15-45 years of age who know how to prevent transmission of HIV.	50% (Urban) 35% (Rural)	54% (Urban) 45% (Rural)

### Accomplishments by Objective

1. *Increase the proportion of children 12-23 months fully immunized by 12 months of age to 60% in combined project areas.*

Among the 300 women with children under the age of two years, there were 136 children in the age range of 12-23 months. Thirty-five percent of these children (47 of 136) had been fully immunized by 24 months of age. Twenty-five percent (34 of 136) had been fully immunized by 12 months of age. (Fully immunized defined as having received BCG, Oral Polio 3, DPT 3 and Measles.)

Because of the problem of recall by mothers of immunizations received by their babies, a requirement of the survey was that only immunizations recorded on a baby card would be considered valid. Eighty percent (109) of the mothers interviewed with children in the age range of 12-23 months were able to show the interviewer their child's baby card.

2. *Increase the proportion of mothers of children under 2 years of age whose most recent delivery was fully protected against tetanus to 70% in combined project areas.*

Among the 300 women interviewed, eleven percent (27 of 300) were fully protected against tetanus (defined as two TT shots). Among the women who had antenatal cards, however, 54% had received two TT shots.

A requirement of the survey was that only TT immunizations recorded on an antenatal card would be considered valid. Only 16% (46) of the mothers interviewed could show the interviewer their antenatal cards.

3. *Increase the ORT use rate for children under two to 60%.*

Thirty-two percent (97) of mothers reported that their children under the age of two years had had diarrhea during the previous two weeks. Fifty-seven percent (55) of

these reported using oral rehydration therapy (ORT) to treat their children (i.e., ORS packet, sugar-salt solution, infusion of liquids).

4. *Increase the proportion of mothers who know when to bring their children with diarrhea to the health facility to 50%.*

Twenty-seven percent (79) of mothers interviewed stated that dehydration (dry mouth, sunken eyes, decreased urine) is a reason to take a child with diarrhea to a health facility. Thirteen percent (39) said diarrhea lasting more than four days is a reason; 10% (30) stated that more than four watery stools per day requires medical attention; and 3% (9) said blood in the stool is a reason.

This indicator (and several others) is unclear about what constitutes "knowledge". Identifying only one of the listed symptoms is obviously insufficient, but if all are required, the proportion correct falls to 3% or lower.

5. *Increase the proportion of mothers with children under two years of age who know proper weaning practices to 40%.*

Thirty-nine percent (117) of mothers interviewed knew proper weaning practices. (Proper weaning practice was defined as starting to add foods to breast feeding between four and six months, and providing additional foods from one of the following food groups: food cooked in fat; pumpkin, papaya or green leaves; eggs; kaukau or ripe banana.)

6. *Increase the proportion of women who know to eat a greater quantity of food, especially foods containing protein and iron, during pregnancy to 60%.*

Forty-six percent (138) of mothers reported that they ate a greater quantity of food during their most recent pregnancy. Fifty-four percent (160) knew that protein-rich foods (e.g., eggs, fish meat, peanuts) are good for pregnant women, and 92% (275) knew that foods containing iron (e.g., leafy green vegetables) are good for pregnant women.

7. *Increase the proportion of deliveries in project area assisted by trained health worker (VBA or above) to 50% in Kaiapit and 65% in coastal Lae (Huon).*

Forty-seven percent (142) of the mothers interviewed reported that in their most recent delivery they had been assisted (umbilical cord cut) by a trained health worker (i.e., trained VBA, nurse aide, aid-post orderly, community health worker, nursing sister, health education officer, doctor).

This DIP objective (and several others) differentiates between results for Kaiapit and coastal Lae (Huon). The final survey results are for Kaipait and Huon Districts combined.

8. *Increase the proportion of mothers who know to start antenatal care during the first trimester to 50% in Kaiapit and 60% in coastal Lae (Huon).*

Forty-two percent (126) of mothers interviewed knew that a pregnant woman should see a trained health worker (doctor, nurse, midwife, aide-post orderly, community health worker or trained birth attendant) for antenatal care during the first trimester.

This DIP objective (and several others) differentiates between results for Kaiapit and coastal Lae (Huon). The final survey results are for Kaipait and Huon Districts combined.

9. *Increase the proportion of women who had at least two antenatal visits during their last pregnancy to 85% in combined project area.*

According to maternal health cards, fifteen percent (46) of the mothers interviewed had had at least two antenatal visits during their last pregnancy.

Recall of antenatal clinic attendance, especially up to two years, is not reliable. Therefore, a requirement of the survey was that only antenatal visits recorded on an antenatal card would be considered valid. Sixteen percent (46) of the mothers interviewed could show the interviewer their antenatal cards. An additional 119 mothers stated that their antenatal cards had been lost or was kept at the health center. When queried, 63% of mothers indicated from memory that they had attended at least two antenatal clinics during their most recent pregnancies.

10. *Among women who do not want another child within two years (or were not sure), increase the proportion who are using modern contraceptives to 10% in combined project area.*

Eighty-two percent (245) of mothers interviewed indicated that they did not want to have another child within two years or were not sure. Of these women, 33.5% (82) reported using a form of modern contraception.

11. *Increase the proportion of mothers with children under two who know proper recognition of ALRI to 60%.*

Seventeen percent (50) of mothers interviewed knew how to properly recognize acute lower respiratory infection (ALRI). (Defined as a cough, and either "fast or difficult breathing" or "chest indrawing".)

12. *Increase the proportion of men and women 15-45 who know how HIV is transmitted to 50% in urban Lae and 35% in both Kaiapit and coastal Lae (Huon) rural areas.*

In the urban areas, 42% of males and 41% of females knew at least one way in which HIV is transmitted. In the combined rural areas, these figures were 37% and 15%, respectively.

13. *Increase the proportion of men and women 15-45 who know how to prevent transmission of HIV to 50% in urban Lae and 35% in both Kaiapit and coastal Lae (Huon) areas.*

In the urban areas, 60% of males and 48% of females knew at least one way that transmission of HIV can be prevented. In the combined rural areas, these figures were 63% and 27%, respectively.

**APPENDIX 1. SCOPE OF WORK AND SCHEDULE FOR EVALUATION**

**PROJECT CONCERN INTERNATIONAL  
PAPUA NEW GUINEA**

**CHILD SURVIVAL IX: IMPROVING MATERNAL AND CHILD  
HEALTH SERVICES IN MOROBE PROVINCE**

**FINAL EVALUATION: JULY 26 - AUGUST 2, 1996**

**1. Purpose and Scope of Work**

The purpose of this final evaluation is to assess the results of the CS-IX project focussing on the progress it made towards achievement of its objectives as stated in the Detailed Implementation Plan. This will be achieved by reviewing project documents, interviewing personnel involved or trained in the project, and comparing the results of the baseline and final surveys. The details of the project components will be reviewed with the team members at the commencement of the evaluation.

**2. Specific Outputs**

The evaluation team will generate a draft document reporting on their findings during the evaluation. The draft will be completed by the end of the evaluation. A presentation will be made to the Department of Health including a summary of findings and recommendations. The PCI team member will prepare the final report for submission to USAID/Washington after review by the rest of the team.

**3. Dates and Duration of the Evaluation**

The evaluation is scheduled to be conducted from July 26 to August 2, 1996. The team will travel to Lae on the morning of July 26 and depart Lae on the afternoon of August 1. A schedule for the evaluation is attached.

**4. Team Members**

The evaluation team shall consist of the following members:

- \* One external consultant with a background in primary health care, significant experience in Papua New Guinea, and fluency in Tok Pisin; This person will also be someone who is not employed by, or otherwise professionally associated with PCI;
- \* One representative of the Department of Health;
- \* One representative of PCI headquarters, if funding permits;
- \* One representative of USAID, if possible; and
- \* One representative of PCI/PNG's field staff.

## 5. Rationale

It is desired to have objective evaluators from outside the project. These will include the external consultant, and representatives from the DOH, PCI/HQ, and USAID. Due to budget limitations, however, it may not be possible to include a representative from PCI/HQ. PCI will encourage USAID to provide a representative for the evaluation team. Unfortunately, due to the closure of USAID's offices in PNG and the South Pacific, PCI does not expect it will be possible.

The strategy of the Child Survival IX project has focused upon expanding and sustaining the activities of previous PCI MCH projects in Morobe Province. Specifically, PCI has sought to increase the capacity of the provincial and district health staff as well as community leaders to improve the health of their communities. The sites for visits and the persons to be interviewed during the evaluation have been chosen to provide an objective picture of the current capacity of health staff and of community leaders, and to give the evaluation team an understanding of the many challenges faced when improving the health of local communities.

## 6. Evaluation Plan

### A. Geographic Location

The CS-IX project was designed to focus upon Kaiapit District, the coastal areas of Huon District, and, for HIV/AIDS prevention, the settlement areas of urban Lae. It is in these areas that PCI conducted its baseline and final surveys. The secondary focus of the project has been in the remaining eight districts of Morobe Province. In these areas, PCI has utilized a "training of trainers" approach to develop the capacity of health centre staff to plan, implement and monitor VBA training and HIV/AIDS education programs. The evaluation team will have the opportunity to meet with health staff and VBAs in both Kaiapit and Huon Districts, with HIV/AIDS health promoters and community leaders in urban Lae, and with Department of Health officials in Port Moresby. Visits to additional project sites will be arranged upon the request of the evaluation team, time permitting.

### B. Project Accomplishments and Lessons Learned

Achievement of Objectives: The evaluation team will compare project accomplishments with the objectives outlined in the Detailed Implementation Plan (DIP). To do this the team will review the results of the final survey. The team will describe any circumstances which may have aided or hindered the project in meeting these objectives. The team will describe any unintended positive and negative effects of project activities. A summary of the team's

findings will be presented in tabular form.

Lessons Learned: The evaluation team will outline the main lessons learned from the project and their applicability to other child survival projects. The team will identify the strengths and weaknesses of the four components of the project, and provide recommendations to the Department of Health about how to improve follow on activities. The four components of the project are:

- a. Village Birth Attendant Program: A major component of PCI's activities in PNG has been the training and supervision of village birth attendants. During the CS-IX project, PCI has continued to directly train VBAs. To promote sustainability, however, PCI has shifted its focus towards the training VBA trainers. The evaluation team will interview VBAs who were trained directly by PCI staff as well as VBAs who were trained by PCI-trained VBA trainers. The evaluation team will also interview PCI-trained VBA trainers in Huon, Kaipit and Wau districts. The evaluation team will review training manuals, training materials, and equipment used during CS-IX, including the VBA training manual, and the TOT-VBA manual.
- b. Men's Health Education: A major innovation of PCI's work in PNG has been the health education activities for men. During CS-IX, men's health education continued to be an integral activity in support of the VBA program, and was expanded to include information about HIV/AIDS and STDs. The evaluation team will review the results of this component, assess curricula and materials used and, if available, interview some of the village men who have participated.
- c. Training of Health Promoters: The evaluation team will also review the training of community leaders to become health promoters in order to disseminate health messages on child survival interventions and HIV/AIDS. The evaluation team will review training curricula and materials, and observe a training of HIV/AIDS health promoters in Lae. Time permitting, the evaluation team will conduct interviews with PCI-trained health promoters and assess the depth of their knowledge about HIV/AIDS. The evaluation team will pay particular attention to the recommendations of the mid-term evaluation team regarding the TOHP component.
- d. Training Resources Center: Established in 1994, the training resource center is being turned over to the Huon District Department of Health, effective April 1996. The evaluation team will visit the new site of the TRC, review the educational materials and equipment it contains, and interview the TRC coordinator. Particular attention should be paid to the TRC's past and future support for health training activities in Morobe Province.

**C. Project Sustainability**

Community Participation: The evaluation team should identify what resources the community contributed and will continue to contribute to encourage continuation of project activities after the project ends.

Willingness of Counterpart Institutions to Sustain Activities: The evaluation team should review the current ability of the DOH to provide the necessary financial, human, and material resources to sustain project activities.

Sustainability Plan, Objectives, Steps Taken and Outcomes: The evaluation team should review the steps the project has undertaken to promote sustainability of project activities once funding ends. The following table should be completed:

Goal	End-of-Project Objectives	Steps Taken to Date	Outcomes

**7. Contact Persons**

Jeff Billings, Technical Support Officer, PCI/HQ, tel: 619-279-9690  
David Prettyman, Country Director, PCI/PNG, tel: 675-42-5188

**APPENDIX 2: FINAL EVALUATION SCHEDULE**

PROJECT CONCERN INTERNATIONAL  
PAPUA NEW GUINEA

CHILD SURVIVAL IX: IMPROVING MATERNAL AND CHILD  
HEALTH SERVICES IN MOROBE PROVINCE

FINAL EVALUATION: 25 JULY - 2 AUGUST 1996

- 25 July Port Moresby: Evaluation team meets to review project documents, final survey results, and to prepare interview questions.
- 26 July Travel POM to Lae (first flight).  
Interviews with Provincial Department of Health staff.  
Interviews with Huon District Department of Health staff.
- 27 July Interviews with current and former PCI staff.  
Visit to Health Training Resources Center.
- 28 July Day off.
- 29 July Travel to Mutzing Health Centre, Kaiapit District (a.m.)  
Interview with Kaiapit District Department of Health staff.  
Interviews with project-trained VBAs.  
Return to Lae (p.m.)
- 30 July Interviews with HIV/AIDS health promoters in urban Lae.  
Interviews with World Vision, ADRA and other members of the World AIDS Day/Provincial AIDS Committee
- 31 July Evaluation team reviews findings and prepares draft report/presentation
- 1 August Evaluation team meets with DOH staff to make presentation and discuss findings  
Evaluation team revises draft report  
Evaluation team returns to Port Moresby (last flight)
- 2 August Evaluation consultant and PCI Country Director meet with National Department of Health in Port Moresby to discuss findings

### **APPENDIX 3: EVALUATION TEAM MEMBERS**

**Michael E. Ballinger:** Evaluation Team Leader and External Evaluation Consultant (C.V. attached.)

**John Pomat:** Chief of Information Section, Morobe Province Department of Health.

**David T. Prettyman:** Country Director, Project Concern International/Papua New Guinea (C.V. attached).



## APPENDIX 4: LIST OF PERSONS INTERVIEWED

### PCI Staff

Phillip Posanau, Project Director  
Anne Kitoneka, Provincial Training Coordinator  
Muwete Gatsia, District Training Officer, Huon District  
Warito Yasi, Men's Health Educator  
Mandy Namis, District Training Officer, Kaiapit District  
Martha Lukas, Training Resources Center Coordinator

### Morobe Province Division of Health

Dr. Likei Theo  
Micah Yawing  
Sr. Wahazoka

### Kaiapit District/Mutzing Health Center

Veronica Waffi, District Health Administrator  
Sr. L. Ambrias, Sister-in-Charge

### National Department of Health

Enoch Posanai

### HIV/AIDS Health Promoters

Pastor Awateng Matemso  
Andrew Dima  
Michael  
Pastor Bonnia Sinako

### Village Birth Attendants

Kisa Martin, Warizian Village  
Muarutz Yasara, Tofmara Village  
Nganuo Yansom, Inzi Village  
Naying Yapi, Tofmura Village  
Garias Ripus, Tumua Village  
Rita Jhon, Inzi Village  
Giwibingo Ngaiam, Numbugu Village  
Manzas Gorom, Binimap Village  
Imung Yanac, Puguap Village  
Dnagio Apostel, Puguap Village  
Rita Joe, Urai Village

### World AIDS Day/Provincial AIDS Committee

Luke Temba, Huon District Secretary's Office  
James Mintik, World Vision International/Lae AIDS Project  
Bing Sawanga, Morobe Dept. of Education, Adult Education Program  
Peter Gwynne, ADRA

**APPENDIX 5: FINAL PIPELINE ANALYSIS**

## FINANCIAL STATUS REPORT

(Short Form)

(Follow instructions on the back)

1. Federal Agency and Organizational Element to Which Report is Submitted <i>Agency for International Dev. FM/CMP/LC</i>		2. Federal Grant or Other Identifying Number Assigned By Federal Agency <i>FAO-0500-A-00-3030-00</i>		OMB Approval No. <b>0348-0039</b>	Page <b>1</b> of <b>1</b> pages
3. Recipient Organization (Name and complete address, including ZIP code) <i>Project Concern International 3550 Afton Road San Diego, CA 92123</i>					
4. Employer Identification Number <i>95-2248462</i>		5. Recipient Account Number or Identifying Number <i>CSIX-204</i>		6. Final Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7. Basis <input type="checkbox"/> Cash <input checked="" type="checkbox"/> Accrual					
8. Funding/Grant Period (See Instructions) From: (Month, Day, Year) <i>October 1, 1992</i>		To: (Month, Day, Year) <i>August 31, 1996</i>		9. Period Covered by this Report From: (Month, Day, Year) <i>July 1, 1996</i>	
				To: (Month, Day, Year) <i>September 30, 1996</i>	
10. Transactions:			I Previously Reported	II This Period	III Cumulative
a. Total outlays			1,064,345	76,021	1,140,366
b. Recipient share of outlays			252,607	35,532	288,139
c. Federal share of outlays			811,738	40,489	852,227
d. Total unliquidated obligations					0
e. Recipient share of unliquidated obligations					0
f. Federal share of unliquidated obligations					0
g. Total Federal share (Sum of lines c and f)					852,227
h. Total Federal funds authorized for this funding period					852,227
i. Unobligated balance of Federal funds (Line h minus line g)					0
11. Indirect Expense					
a. Type of Rate (Place "X" in appropriate box) <input checked="" type="checkbox"/> Provisional <input type="checkbox"/> Predetermined <input type="checkbox"/> Final <input type="checkbox"/> Fixed					
b. Rate		c. Base		d. Total Amount	
26.62		60,038		15,983	
e. Federal Share					
8,512					
12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.					
13. Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.					
Typed or Printed Name and Title <i>Laurie Rapkiewicz Chief Financial Officer</i>				Telephone (Area code, number and extension) <i>(619) 279-9690</i>	
Signature of Authorized Certifying Official <i>Laurie Rapkiewicz</i>				Date Report Submitted <i>9/30/96</i>	

PIPELINE ANALYSIS  
 GRANT - FAD-0500-A-00-3030-00 - (204) CSIX  
 FOR PERIOD - 09/01/93-08/31/96  
 FILE NAME - CSIX0896

	ACTUAL EXPENDITURES TO DATE (09/01/93/-08/31/96)			TOTAL AGREEMENT BUDGET (09/01/93/-08/31/96)			REMAINING OBLIGATED FUNDS (09/01/96/-08/31/96)		
	AID	PCI	TOTAL	AID	PCI	TOTAL	AID	PCI	TOTAL
PERSONNEL	420,195	139,238	559,433	374,331	104,348	478,679	(45,864)	(34,890)	(80,754)
TRAVEL/PER DIEM	88,675	12,249	100,924	108,980	13,218	122,198	20,305	969	21,274
CONSULTANTS	18,186	3,087	21,273	46,900	4,000	50,900	28,714	913	29,627
PROCUREMENT	23,307	43,929	67,236	26,320	58,200	84,520	3,013	14,271	17,284
OTHER DIRECT COSTS	133,687	41,334	175,021	116,575	37,080	153,655	(17,112)	(4,254)	(21,366)
IN-DIRECT COSTS	168,177	48,302	216,479	179,121	64,816	243,937	10,944	16,514	27,458
TOTAL	852,227	288,139	1,140,366	852,227	281,662	1,133,889	0	(6,477)	(6,477)

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**APPENDIX 6: ACHIEVEMENT OF PROJECT ACTIVITIES**

PCI/PAPUA NEW GUINEA: CHILD SURVIVAL IX PROJECT  
 Summary Report on Achievement of Project Activities  
 September 1993 - August 1996

Activity	DIP Targets		Year 1		Year 2		Year 3		Achievements			
	Activities Planned	Persons to be Trained	Activities Completed	Persons Trained	Activities Completed	Persons Trained	Activities Completed	Persons Trained	Activities Completed	% of Target	Persons Trained	% of Target
1. Training of VBAs	15	180	1	14	6	104	4	72	11	73%	190	106%
2. Training of Community Leaders to be Health Promoters (by Topics):	15	150	2	18	12	291	3	53	17	113%	362	241%
-HIV/AIDS			1	12	11	251	3	53	15		316	
-Nutrition			1	6	1	30	0	0	2		36	
-Family Planning			0	0	4	92	0	0	4		92	
-Immunization			0	0	1	30	0	0	1		30	
-CDD/ARI			0	0	0	0	0	0	0		0	
3. One-Week In-Service Training for Health Staff	9	150	3	30	1	30	0	0	4	44%	60	40%
4. Two-hour In-Service for Health Staff (incl. HIS)	45	450	2	21	9	119	0	0	11	24%	140	31%
5. Men's Health Education Sessions	18	360	0	0	3	92	3	32	6	33%	124	34%
6. Training of VBA Trainers	5	30	1	10	4	44	2	26	7	140%	80	267%
7. Develop/Test Sets of IEC Materials for HIV/AIDS	18	n.a.	1	n.a.	0	n.a.	0	n.a.	1	6%	n.a.	n.a.
8. HIV/AIDS Workshops	6	90	1	60	1	23	0	0	2	33%	83	92%
9. Facilitate Provincial AIDS Committee Meetings	18	n.a.	0	0	0	0	0	n.a.	0	0%	n.a.	n.a.
10. External Evaluations	2	n.a.	0	n.a.	1	n.a.	1	n.a.	2	100%	n.a.	n.a.

PCI/PAPUA NEW GUINEA: CHILD SURVIVAL IX PROJECT  
 Summary Report on Project Activities Not Included in Detailed Implementation Plan  
 September 1993 - August 1996

Activity	DIP Targets		Year 1		Year 2		Year 3	
	Activities Planned	Persons to be Trained	Activities Completed	Persons Trained	Activities Completed	Persons Trained	Activities Completed	Persons Trained
1. Malaria Prevention & Net Treatment Workshop	n.a.	n.a.	1	26	n.a.	n.a.	n.a.	n.a.
2. World AIDS Day	n.a.	n.a.	1	n.a.	1	1000	1	n.a.
3. Health Education for Villagers at Lae Town Clinic			1	17	n.a.	n.a.	n.a.	n.a.
4. Two-Day Workshops for Village Health Committee	n.a.	n.a.	n.a.	n.a.	1	28	n.a.	n.a.
5. Health Talks to Villagers	n.a.	n.a.	n.a.	n.a.	3	610	n.a.	n.a.
6. Health Education Sessions by PCI-Trained Health Promoters	n.a.	n.a.	n.a.	n.a.	11	2821	n.a.	n.a.
7. Morobe Immunization Campaign	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	n.a.

**APPENDIX 7: FINAL SURVEY REPORTS**

**KNOWLEDGE, PRACTICE AND COVERAGE  
SURVEY REPORT**

**CHILD SURVIVAL IX PROJECT:**

**Improving Maternal and Child Health Service**

**Morobe Province, Papua New Guinea**

**MARCH 1996**

**PROJECT CONCERN INTERNATIONAL**

**PAPUA NEW GUINEA**

## LIST OF TERMS

ALRI	Acute Lower Respiratory Infection
APO	Aide-Post Orderly
CHW	Community Health Worker
DIP	Detailed Implementation Plan
DOH	Department of Health
DPT	Diphtheria, Pertussis, Tetanus
HEP-B	Hepatitis-B
KPC	Knowledge, Practice, Coverage
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCI	Project Concern International
PNG	Papua New Guinea
TT	Tetanus Toxoid
USAID	United States Agency for International Development
VBA	Village Birth Attendant

## I. Executive Summary

Project Concern International (PCI) conducted a survey of 300 women with children under the age of 24 months in Kaiapit District and the coastal region of Huon District in February-March 1996. The purpose of this survey was to determine the knowledge, practices and coverage (KPC) of women and children under the age of 24 months in the areas of immunization, control of diarrheal disease, nutrition, maternal/safe delivery, family planning and acute lower respiratory infection (ALRI). This report is a summary of the key findings resulting from the survey.

This KPC survey was conducted to determine the impact of PCI's Child Survival IX Project: Improving Maternal and Child Health Services in Morobe Province, Papua New Guinea. The methodology utilized by the survey was the World Health Organization's 30-cluster sampling technique. The sample size was drawn from a total population of 54,220 living in 244 villages in Kaiapit and Huon districts. Each mother was asked 52 questions, 26 pertaining to maternal and child health. An additional 26 questions were asked regarding HIV/AIDS. The results of the HIV/AIDS questions are detailed in a separate report.

Among the key findings of the KPC survey was that antenatal care appears to be improving among women in the project area with more women attending antenatal clinics and receiving assistance from a trained health worker. Immunization rates for both children under the age of 12 months and for mothers, however, are still very low in the project area. Knowledge about the warning signs of diarrheal disease and ALRI is low but, among women whose children had recently suffered from diarrhea, ORT use rates were encouragingly high. Finally, a higher percentage of women reported using a form of modern contraception than was expected.

## II. Introduction

### A. Background Information on PCI

Project Concern International/PNG began activities in 1986 in response to a request from the National Department of Health with Matching Grant funding from USAID. After securing legal status, the initial project was launched in Kaiapit District of Morobe Province. The major focus of the program was the training of village women to serve as Village Birth Attendants (VBAs) who, in many cases, would provide the only trained assistance available to women in their communities during pregnancy and childbirth.

In 1990, PCI received funding from USAID's Child Survival VI program to expand the interventions and extend the initial project in Morobe Province.

In 1993, the project was extended with Child Survival IX funding. Activities funded by this cooperative agreement include: 1) recruitment and training of VBAs in concert with the DOH and other organizations; 2) in-service training for Community Health Workers and Aide Post Orderlies; 3) training of HIV/AIDS educators; 4) supporting local theater groups for the dissemination of HIV/AIDS information; 5) conducting HIV/AIDS awareness activities, such as workshops and awareness campaign days; 6) training of VBA trainers; and 7) establishment of a Health Training Resources Center in Lae.

### B. Purpose of Survey

The purpose of the survey was to determine knowledge, practices and coverage regarding five Child Survival interventions: immunization, control of diarrheal diseases, nutrition, control of pneumonia, and maternal care/family planning. The data collected by the survey will be utilized to determine achievement of the project objectives included in the Detailed Implementation Plan (DIP). It will also provide important baseline data for future maternal and child health programs in Morobe Province.

The specific objectives of the survey were to measure:

- \* Knowledge about immunization, control of diarrheal diseases, nutrition, control of pneumonia, and maternal care/family planning.

- \* Practices regarding diarrheal diseases, breastfeeding/nutrition, antenatal care, family planning, and delivery.
- \* Immunization coverage for women and children.

### III. Methodology

#### A. Process

Introductory letters explaining the purpose and timing of the survey were delivered to the headman and the head of the village women's group in each village. Health center staff also notified community leaders in some cases. Whenever possible, a PCI staff member visited the village prior to the survey to speak personally with the local leaders.

The KPC final survey was conducted in conjunction with an HIV/AIDS survey and included some of the same respondents. In total, four survey questionnaires were prepared and translated by PCI. These questionnaires were based on those used during prior surveys conducted in 1992 and 1993:

- \* Rural KPC questionnaire including HIV/AIDS questions (female only)
- \* Rural HIV/AIDS questionnaire (male only)
- \* Urban HIV/AIDS questionnaire (female version)
- \* Urban HIV/AIDS questionnaire (male version)

Each of the questionnaires were translated into Pidgin. The child survival-related questions on the rural KPC questionnaire were identical to those used during earlier, baseline surveys. For this reason, it was not felt necessary to do additional pretesting.

#### B. Sample Size

PCI randomly selected 300 women living in 30 villages in a geographic area covering all ten census divisions in Kaiapit district and four census divisions in the coastal areas of Huon District. In each cluster PCI randomly selected ten women between the ages of 15 and 45 with at least

one child under the age of 24 months. Women were asked 26 questions relating to child survival and an additional 26 questions about HIV/AIDS. Simultaneously, and in the same 30 villages, a total of 300 men between the ages of 15 and 45 were asked 26 questions about HIV/AIDS. (See HIV/AIDS Survey Report.)

### C. Cluster Determination Strategy

The KPC survey was carried out in all ten census divisions of Kaiapit District and four census divisions of coastal areas of Huon District. A total of 300 women were randomly selected utilizing the WHO's 30-cluster sampling technique, as follows:

- 1) First, a sampling frame, consisting of a list of all villages in the sampling area was drawn up. This list showed the population per village and the cumulative population.
- 2) The sampling interval was determined by dividing the total population by 30, i.e., the number of clusters.
- 3) A random number was selected which is less than or equal to the sampling interval.
- 4) When the random number was selected, the cumulative population was examined to determine in which village it lay. This village was thus designated as the site of Cluster I.
- 5) The next cluster site was determined by adding the Cluster I value to the sampling interval. The village in which the resultant value lay was designated as Cluster II.

The figure of 1,654 for Cluster I was found using a table of random values to select a value between 1 and 1,807 (the sampling interval). The first cluster chosen was Buansing village. Then the cluster value was added to the sampling interval, and thus Cluster II was determined by the addition of  $1,652 + 1,807 = 3,459$ . This value lay in Laukanu village. This system of adding the sampling interval to the previous cluster value was continued until 30 clusters were obtained (See Appendix C).

#### D. Training

Training for nine supervisors and 18 interviewers was conducted in Lae from February 19 to March 1. The training was coordinated by Anne Kitoneka, PCI's Provincial Training Officer assisted by Jeff Billings, Technical Support Officer, PCI/San Diego. The training schedule included one day each for core team and supervisors' training. The supervisors included five PCI staff and four other community leaders or health workers who had been involved in previous PCI surveys. A list of the supervisors and interviewers can be found in Appendix B.

Eight teams were formed, each including at least one male interviewer, or team leader. Most teams were composed of two females and one male. Due to local language differences, teams included, whenever possible, supervisors or interviewers originating from the general area of the clusters to be surveyed. When necessary, a local leader was hired to serve as translator for the survey team.

#### E. Field Methods and Interviews

The surveys were carried out on a house to house basis. Upon arriving in the survey cluster site, a rough map was drawn with the assistance of village leaders. In order to determine the first household to be approached a location in front of the village or settlement church was chosen. Here, a member of the survey team spun a pen on a piece of paper, the direction in which it pointed, after coming to a rest, being the direction in which the team initially proceeded. From this central point, the team counted the number of houses along an axis going outwards toward the furthers edge of the village. A random number less than or equal to the number of houses along this axis ( $n$ ) was chosen by selecting numbers from a plastic bag. Using this number the team counted outwards from the center of the village. The  $n$ th house along this axis became the starting point for the cluster, i.e., the site of the first interview.

After the first household was chosen, it was initially determined if there was an appropriate individual to be interviewed. For the KPC survey, for example, it was determined if there was a child below two years of age in the household, and if the mother was present at the time. If so, the mother was interviewed. In cases where there was not a child below two years of age in the household, or the mother of an eligible child was not present,

another household was sought. This was done by selecting the house whose front door was nearest the front door of the first house. Again, the family of this house was approached to determine if there was a child in the household who came within the scope of this survey, and so on, until eight ten mothers had been interviewed in that cluster.

#### F. Data Analysis

Epi Info 6.0, created by WHO and the Centers for Disease Control in Atlanta, Georgia, was used for the preparation of the survey format and the analysis of the data.

#### IV. Survey Results

##### A. Immunization

Among the 300 women with children under the age of two years, there were 136 children in the age range of 12-23 months. Thirty-five percent of these children (47 of 136) had been fully immunized by 24 months of age. (Fully immunized was defined as having received BCG, Oral Polio 3, DPT 3 and Measles.) Twenty-five percent (34 of 136) had been fully immunized by 12 months of age.

Because of the problem of recall by mothers of immunizations received by their babies, a requirement of the survey was that only immunizations recorded on a baby card would be considered valid. Eighty percent (109) of the mothers interviewed with children in the age range of 12-23 months were able to show the interviewer their child's baby card.

Among the 300 women interviewed, eleven percent (27 of 300) were fully protected against tetanus (defined as two TT shots). A requirement of the survey was that only TT immunizations recorded on an antenatal card would be considered valid. Only 16% (46) of the mothers interviewed could show the interviewer their antenatal cards. Among the women who had antenatal cards, however, 54% had received two TT shots.

##### B. Control of Diarrheal Disease

Thirty-two percent (97) of mothers reported that their children under the age of two years had had diarrhea during the previous two weeks. Fifty-seven percent (55) of these reported using oral rehydration therapy (ORT)

to treat their children (i.e., ORS packet, sugar-salt solution, infusion of liquids).

Only three percent of mothers were able to correctly identify all four of the danger signs of diarrhea. Twenty-seven percent (79) of mothers interviewed stated that dehydration (dry mouth, sunken eyes, decreased urine) is a reason to take a child with diarrhea to a health facility. Thirteen percent (39) said diarrhea lasting more than four days is a reason; 10% (30) stated that more than four watery stools per day requires medical attention; and 3% (9) said blood in the stool is a reason.

#### C. Nutrition

Thirty-nine percent (117) of mothers interviewed knew proper weaning practices. (Proper weaning practice was defined as starting to add foods to breast feeding between four and six months, and providing additional foods from one of the following food groups: food cooked in fat; pumpkin, papaya or green leaves; eggs; kaukau or ripe banana.)

Forty-six percent (138) of mothers reported that they ate a greater quantity of food during their most recent pregnancy. Fifty-four percent (160) knew that protein-rich foods (e.g., eggs, fish meat, peanuts) are good for pregnant women, and 92% (275) knew that foods containing iron (e.g., leafy green vegetables) are good for pregnant women.

The question in the survey questionnaire regarding "amount of food", however, was phrased in such a way as to gather information about the mother's actual consumption of food during the most recent pregnancy. In this case, correlation can be assumed between the mother's practice and her knowledge.

#### D. Maternal Health/Safe Delivery

Forty-seven percent (142) of the mothers interviewed reported that in their most recent delivery they had been assisted (umbilical cord cut) by a trained health worker (i.e., trained VBA, nurse aide, aid-post orderly, community health worker, nursing sister, health education officer, doctor).

Forty-two percent (126) of mothers interviewed knew that a pregnant woman should see a trained health worker (doctor, nurse, midwife, aide-post orderly, community health worker or trained birth attendant) for

antenatal care during the first trimester. Fifteen percent (46) of the mothers interviewed had had at least two antenatal visits during their last pregnancy.

Recall of antenatal clinic attendance, especially up to two years, is not reliable. Therefore, a requirement of the survey was that only antenatal visits recorded on an antenatal card would be considered valid. Sixteen percent (46) of the mothers interviewed could show the interviewer their antenatal cards. An additional 119 mothers stated that their antenatal cards had been lost or was kept at the health center. When queried, 63% of mothers indicated from memory that they had attended at least two antenatal clinics during their most recent pregnancies.

E. Family Planning

Eighty-two percent (245) of mothers interviewed indicated that they did not want to have another child within two years or were not sure. Of these women, 33.5% (82) reported using a form of modern contraception.

F. Acute Lower Respiratory Infection (ALRI)

Seventeen percent (50) of mothers interviewed knew how to properly recognize acute lower respiratory infection (ALRI). For the purposes of the survey, knowledge of how to recognize ALRI was defined as recognizing two signs: a cough, and either "fast or difficult breathing" or "chest indrawing."

- VI. Appendices
  - A. Survey Questionnaires
  - B. Survey Supervisors and Interviewers
  - C. List of Clusters

## **Appendix A. Survey Questionnaires**

Cluster No. \_\_\_\_\_  
House No. \_\_\_\_\_  
Interviewer \_\_\_\_\_

**FINAL KNOWLEDGE, PRACTICE & COVERAGE (KPC) SURVEY  
MOTHERS**

**ALL QUESTIONS ARE TO BE ADDRESSED TO THE MOTHER (WOMEN 15-45  
YEARS OLD) WITH A CHILD UNDER TWO (LESS THAN 24 MONTHS OLD)**

1. How old were you on your last birthday? AGE IN YEARS \_\_\_\_\_
2. What was the highest educational level you attained?
  1. None
  2. Primary, does not read
  3. Primary, reads
  4. Secondary & higher
3. What is your marital status?
  1. Married
  2. Separated/Divorced/Widowed
  3. Never married
4. Name and age of the child under two years old  
(IF MORE THAN ONE CHILD, SELECT THE YOUNGEST)  
NAME \_\_\_\_\_ AGE IN MONTHS \_\_\_\_\_  
BIRTH DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ (dd/mm/yy)

**Breast Feeding/Nutrition**

5. Are you breast feeding (*name of child*)?
  1. Yes (GO TO QUESTION 7)
  2. No
6. Have you ever breast fed (*name of child*)?
  1. Yes
  2. No
7. a. Are you giving (*name of child*) water or coconut water?
  1. Yes
  2. No
  9. Don't know

- b. Are you giving (*name of child*) semi-solid foods such as mashed banana, papaya, cooked/mashed kaukau or pumpkin?
1. Yes
  2. No
  9. Don't know
- c. Are you giving (*name of child*) fruits or juice such as watermelon, guava, mango or muli?
1. Yes
  2. No
  9. Don't know
- d. Are you giving (*name of child*) leafy green vegetables such as aibika, choko tips or pumpkin tips?
1. Yes
  2. No
  9. Don't know
- e. Are you giving (*name of child*) meat, fish, or insects?
1. Yes
  2. No
  9. Don't know
- f. Are you giving (*name of child*) nuts, peanuts or beans?
1. Yes
  2. No
  9. Don't know
- g. Are you giving eggs to (*name of child*)?
1. Yes
  2. No
  9. Don't know
- h. Do you cook with grease, oil, dripping or do you mix coconut creme or coconut oil with (*name of child's*) foods?
1. Yes
  2. No
  9. Don't know
8. When should a mother start adding foods to breast feeding?
1. Start adding earlier than 4 months
  2. Start adding between 4 and 6 months
  3. Start adding 6 months or later
  9. Don't know

9. What should those additional foods to breast feeding be?  
(MULTIPLE ANSWERS POSSIBLE; RECORD ALL ANSWERS)
- a. Food cooked in fat such as dripping, oil or coconut cream
  - b. Give pumpkin, papaya, green leaves
  - c. Give eggs
  - d. Give kaukau, ripe banana
  - e. Others (specify) \_\_\_\_\_

### Diarrheal Diseases

10. Has (*name of child*) had diarrhea during the last two weeks?
- 1. Yes
  - 2. No (GO TO QUESTION 12)
  - 9. Don't know (GO TO QUESTION 12)
11. When (*name of child*) had diarrhea, what treatment, if any, did you use?  
(MULTIPLE ANSWERS POSSIBLE; RECORD ALL ANSWERS)
- a. Nothing
  - b. ORS packet
  - c. Sugar-salt solution
  - d. Starch based solutions (kaukau or rice cooking water)
  - e. Green coconut water
  - f. Tea, sugar water, or other fluids
  - g. Anti-diarrhea medicine or antibiotics
  - h. Others (specify) \_\_\_\_\_
12. What signs/symptoms would cause you to seek advice or treatment for  
(*name of child's*) diarrhea?  
(MULTIPLE ANSWERS POSSIBLE; RECORD ALL ANSWERS)
- a. Vomiting
  - b. Fever
  - c. Dry mouth, sunken eyes, decreased urine
  - d. More than 4 watery stools per day
  - e. Diarrhea lasting more than 4 days
  - f. Blood in the stool
  - g. Loss of appetite
  - h. Weakness or tiredness
  - i. Others (specify) \_\_\_\_\_

**Respiratory Illness**

13. What are the signs/symptoms of respiratory infection that would cause you to take (*name of child*) to a health facility? (MULTIPLE ANSWERS POSSIBLE; RECORD ALL ANSWERS)
1. Fast or difficult breathing
  2. Chest indrawing
  3. Loss of appetite
  4. Fever
  5. Cough
  6. Others (specify) \_\_\_\_\_
  9. Don't know

**Immunizations**

14. Do you have a baby book or baby card for (*name of child*)?
1. Yes (MUST SEE CARD)
  2. Lost it (GO TO QUESTION 16)
  3. Never had one (GO TO QUESTION 16)
15. (LOOK AT THE BABY CARD AND RECORD THE DATES OF ALL THE IMMUNIZATIONS IN THE SPACE BELOW)

Type	Number	Date Recorded
BCG		/ /
HBV (Hepatitis)	1st	/ /
HBV (Hepatitis)	2nd	/ /
HBV (Hepatitis)	3rd	/ /
TA (DPT)	1st	/ /
TA (DPT)	2nd	/ /
TA (DPT)	3rd	/ /
Sabin (Polio)	1st	/ /
Sabin (Polio)	2nd	/ /
Sabin (Polio)	3rd	/ /
Measles	1st	/ /
Measles	2nd	/ /

**Maternal Care**

16. When you were pregnant with (name of child) did you get an Antenatal Card?

1. Yes (MUST SEE CARD)
2. Kept at health centre (GO TO QUESTION 18)
3. Lost it (GO TO QUESTION 18)
4. No (GO TO QUESTION 18)
9. Don't know (GO TO QUESTION 18)

17. (LOOK AT THE ANTENATAL CARD AND RECORD THE NUMBER OF TT VACCINATIONS AND ANTENATAL VISITS BELOW)

\*\*\*\*\*

TT vaccinations:

1. One
2. Two or more
3. None

Antenatal Visits:

1. One
2. Two
3. Three or more
4. None

\*\*\*\*\*

18. (IF MOTHER HAS NO ANTENATAL CARD WITH HER): How many times did you attend antenatal clinic during pregnancy with (name of child)?

1. One
2. Two
3. Three
4. More than three
5. None
9. Don't remember

19. Are you pregnant now?

1. Yes (GO TO QUESTION 23)
2. No
9. Don't know/not sure

20. Do you want to have another child in the next two years?

1. Yes (GO TO QUESTION 23)
2. No
9. Don't know

21. Are you currently using any method to avoid/postpone getting pregnant?

1. Yes
2. No (GO TO QUESTION 23)

22. What is the main method you and your husband are using now to avoid/postpone getting pregnant?
1. Tubal ligation/vasectomy
  2. Injections
  3. Pill
  4. IUD, loop
  5. Condom
  6. Breastfeeding only
  7. Rhythm or other "natural" method
  8. Abstinence/staying apart/not having sex
  9. Withdrawal
  10. Traditional method or medicine
  11. Other (specify) \_\_\_\_\_
23. How soon after a woman knows she is pregnant should she see a trained health worker (doctor, sister, nurse, midwife, APO, CHW or Trained Birth Attendant) (PROBE FOR MONTHS)
1. 1 - 3 months
  2. 4 - 6 months
  3. 7 - 9 months
  4. No need to see a health worker
  9. Don't know
24. What foods are good for a pregnant women to eat to prevent short of blood? (MULTIPLE ANSWERS POSSIBLE; RECORD ALL ANSWERS)
- a. Eggs, fish, meat, peanuts
  - b. Leafy green vegetables
  - c. Others (specify) \_\_\_\_\_
  - d. Don't know
25. When you were pregnant with (*name of child*), was the amount of food you ate....  
(READ THE CHOICES TO THE MOTHER)
1. Less than usual
  2. Same as usual
  3. More than usual
  9. Don't remember
26. Who helped you to cut the cord of your (*name of child*)?
0. No help (cut it myself)
  1. Doctor
  2. HEO
  3. Nursing sister
  4. Nurse aide, APO, CHW
  5. Trained Village Birth Attendant
  6. Untrained (traditional) birth attendant
  7. Relatives
  8. Other (specify) \_\_\_\_\_
  9. Don't remember

**HIV/AIDS**

27. Have you ever heard of the disease called AIDS?

- 1. Yes
- 2. No (GO TO QUESTION 44)

28. Is there a cure for AIDS now?

- 1. Yes
- 2. No
- 9. Don't know

29. How does AIDS spread?

	<u>Unprompted</u>	<u>Prompted</u>		<u>Don't</u>
	Yes	Yes	No	Know
a. By an infected mother to her unborn child?.....	1	2	3	4
b. From toilets?.....	1	2	3	4
c. By having sex with an infected person?.....	1	2	3	4
d. By shaking hands?.....	1	2	3	4
e. By prostitution?.....	1	2	3	4
f. From blood transfusions?.....	1	2	3	4
g. Through injections?.....	1	2	3	4
h. From mosquitoes?.....	1	2	3	4
i. From razor blades?.....	1	2	3	4
j. From sharing utensils?.....	1	2	3	4
k. Other _____	1			

30. Do you think that a person can be infected with AIDS but still look and feel healthy?

- 1. Yes
- 2. No
- 9. Don't know

31. Do you think that someone who looks healthy but is infected with AIDS can pass it on to other people?

- 1. Yes
- 2. No
- 9. Don't know

32. How can people prevent themselves from getting AIDS?

	<u>Unprompted</u>	<u>Prompted</u>		<u>Don't</u>
	Yes	Yes	No	Know
a. By having fewer sex partners?.....	1	2	3	4
b. By not sharing needles & syringes? ..	1	2	3	4
c. By using condoms?.....	1	2	3	4
d. By avoiding sex with prostitutes?..	1	2	3	4

- e. By getting treatment for STDs?..... 1      2      3      4
- f. By avoiding skin piercing with unsterile instruments?..... 1      2      3      4
- g. By washing regularly?..... 1      2      3      4
- h. By having a good diet?..... 1      2      3      4
- i. Other \_\_\_\_\_1

33. Do you think that people in this community are in danger of getting AIDS?  
 1. Yes  
 2. No  
 9. Don't know

34. How likely do you think you are of becoming infected with AIDS?  
 1. Very likely  
 2. Likely  
 3. Unlikely  
 4. Very unlikely  
 9. Don't know

35. Are you doing anything to protect yourself against AIDS?  
 1. Yes  
 2. No (GO TO QUESTION 37)

36. What are you doing to protect yourself against AIDS?  
 (DO NOT READ OPTIONS)

	<u>Yes</u>	<u>No</u>
a. Use condoms.....	1	2
b. Have one faithful sex partner.....	1	2
c. Have fewer sex partners.....	1	2
d. Avoid certain types of partners.....	1	2
e. Regular clinical check ups.....	1	2
f. Other _____	1	

37. Should children in Grades 5-8 be taught about AIDS?  
 1. Yes  
 2. No  
 9. No opinion (GO TO QUESTION 39)

38. What is your reason? \_\_\_\_\_

39. If someone in your community had AIDS, would you be willing:  
 (READ EACH CHOICE)

	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. to shake his/her hand?.....	1	2	3
b. to share a meal with him/her?.....	1	2	3
c. to get water from the same well?.....	1	2	3
d. to use the same toilet?.....	1	2	3

55

40. In your opinion:	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. Should people with AIDS be isolated from non-infected people?.....	1	2	3
b. Should people with AIDS be able to continue living in the community?.....	1	2	3
c. Should people with AIDS engage in sex?...	1	2	3
d. Should people with AIDS travel to other provinces or countries?.....	1	2	3
e. Should people with AIDS have children?...	1	2	3
f. Do people with AIDS deserve what happened to them?.....	1	2	3
g. Do people with AIDS deserve our help?....	1	2	3

**Project Exposure**

41. Are you aware of any community leaders who give talks about AIDS?  
 1. Yes  
 2. No (GO TO QUESTION 44)
42. Have you attended one of these talks?  
 1. Yes  
 2. No (GO TO QUESTION 44)
43. Who was this community leader? \_\_\_\_\_

**EXPLAIN SENSITIVE NATURE OF QUESTIONS AND RE-EMPHASIZE THE GUARANTEE OF CONFIDENTIALITY**

**Condoms & Sexual Practice**

44. What are condoms used for? (MULTIPLE ANSWERS POSSIBLE)
1. Family planning
  2. Prevent AIDS or STDs
  3. Both family planning and AIDS prevention
  4. Other \_\_\_\_\_
  8. Never heard of condoms (GO TO QUESTION 50)
  9. Don't know (GO TO QUESTION 50)

45. When should condoms be used?
- |  | <u>Unprompted</u> | <u>Prompted</u> | <u>Don't Know</u> |
|--|-------------------|-----------------|-------------------|
|  | Yes               | Yes No          |                   |
| a) Only with men other than your husband/regular partner?..... | 1                 | 2 3             | 4                 |
| b) Only with your husband/regular partner?...                  | 1                 | 2 3             | 4                 |
| c) Each time you have sex with any partner?                    | 1                 | 2 3             | 4                 |
| d) Other _____   | 1                 |                 |                   |
46. Do you think that a condom should be used only once or can it be used more than once?
- Once
  - More than once
  - Don't know
47. Have you ever used a condom? (PAUSE)
- Yes
  - No (GO TO QUESTION 50)
48. When was the last time you used a condom?
- Within the past week
  - Within the past month
  - Within the past six months
  - More than six months ago
  - Never used a condom
  - Don't remember.
49. Of the last three times you had sex, how many times did you use a condom? \_\_\_\_\_ (PROBE)
- Don't know
50. During the past three months, did you have sex with anyone other than your husband/regular partner?
- Yes
  - No (GO TO END)
51. How many different men have you had sex with in the past 3 months? \_\_\_\_
- Don't remember
52. The last time you had sex with someone other than your husband/regular partner did you use a condom?
- NEVER USED A CONDOM
  - Yes
  - No ----> Did you ask him to use a condom?
    - Yes
    - No

**Appendix B. Survey Supervisors and Interviewers**

## **SURVEY SUPERVISORS AND INTERVIEWERS**

### **KPC Survey**

#### **Survey Teams**

Team 1: Buansing, Laukanu	Giro Dei, Supervisor Esther Yawasing Abel Aaron
Team 2: Bugang, Tamigidu, Yambo	Martha Lucas, Supervisor Ayung Gamba Siling Penu
Team 3: Ana, Maiama, Ainse, Kobo, Zare	Phillip Posanau, Supervisor Zikina Zewango Koniel Ogou Wagatora Sogimo
Team 4: Siaga, Singas, Guruf	Mana Itama, Supervisor Billy Mileng Rosemary Itamar
Team 5: Arawik, Ginonga, Matap, Yo-Parengan	Warito Yasi, Supervisor Nathan Yawising Nganining Waekisa
Team 6: Arifiran, Gantisap, Zumim Mutzing, Sangan	Muwete Gatsia, Supervisor Muarutz Yasasa Gabriel Awateng
Team 7: Maiamzaring, Tofmora, Som Mutzing Urban	Mandy Namis, Supervisor Enike Garth Ruth Cornelius
Team 8: Mararassa, Raginam, Wankun #2, Numbugu	Jeffery Magas, Supervisor Tony Randol Lydia Ephraim Robert Awai

## **Appendix C. List of Clusters**

## CS-IX FINAL SURVEY - RURAL POPULATION

### LIST OF CLUSTERS

#	Village	Census Division	District	Population
1.	Buansing	Salamaua	Huon	265
2.	Laukanu	Salamaua	Huon	311
3.	Ana	Morobe North	Huon	112
4.	Maiama	Morobe North	Huon	432
5.	Ainse	Morobe South	Huon	549
6.	Kobo	Morobe South	Huon	220
7.	Zare	Morobe South	Huon	473
8.	Bugang	Bukaua	Huon	277
9.	Tamigidu	Bukaua	Huon	471
10.	<i>YAMBO</i>	Bukaua	Huon	79
11.	Siaga	Waffa	Kaiapit	350
12.	Som	Waffa	Kaiapit	162
13.	Guruf	Onga	Kaiapit	300
14.	Singas	Onga	Kaiapit	234
15.	Arifiran	Atzera	Kaiapit	478
16.	Gantisap	Atzera	Kaiapit	147
17.	Mutzing	Atzera	Kaiapit	194
18.	Sangan	Atzera	Kaiapit	620
19.	Zumim	Atzera	Kaiapit	673
20.	Mararassa	Amari	Kaiapit	275
21.	Raginam	Amari	Kaiapit	335
22.	Wankun #2	Amari	Kaiapit	403
23.	Numbugu	Markham Headwaters	Kaiapit	483
24.	Maiamzaring	Yaros	Kaiapit	279
25.	Tofmora	Yaros	Kaiapit	399
26.	Arawik	Wantoat	Kaiapit	225
27.	Ginonga	Wantoat	Kaiapit	219
28.	Matap	Wantoat	Kaiapit	115
29.	Yo-Parengan	Wantoat	Kaiapit	193
30.	Kaiapit 01	Mutzing Urban	Kaiapit	424

**HIV/AIDS SURVEY REPORT**

**CHILD SURVIVAL IX PROJECT:**

**Improving Maternal and Child Health Service**

**Morobe Province, Papua New Guinea**

**MARCH 1996**

**PROJECT CONCERN INTERNATIONAL**

**PAPUA NEW GUINEA**

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## LIST OF TERMS

AIDS	Acquired Immune Deficiency Syndrome
DIP	Detailed Implementation Plan
DOH	Department of Health
HIV	Human Immunodeficiency Virus
KPC	Knowledge, Practice, Coverage
PCI	Project Concern International
PNG	Papua New Guinea
USAID	United States Agency for International Development
VBA	Village Birth Attendant

## I. Executive Summary

Project Concern International (PCI) conducted a survey of 900 women and men between the ages of 15 and 45 years of Urban Lae, Kaiapit District, and the coastal region of Huon District in February 1996. The purpose of this survey was to determine knowledge, awareness, and behavior relevant to HIV/AIDS prevention programs. This report is a summary of the key findings resulting from the survey.

This KPC survey was conducted to determine the impact of PCI's Child Survival IX Project: Improving Maternal and Child Health Services in Morobe Province, Papua New Guinea. The methodology utilized by the survey was the World Health Organization's 30-cluster sampling technique. The survey sample was drawn from a population of 85,998. This includes 31,778 living in 34 settlements of urban Lae, and 54,220 living in 244 villages in Kaiapit and Huon districts. Each participant was asked 26 questions were asked regarding HIV/AIDS. The female respondents in the rural areas were asked an additional 26 questions to measure knowledge practices, and coverage (KPC) pertinent to the project's child survival interventions. The results of the KPC questions are detailed in a separate survey report.

Among the key findings of the HIV/AIDS survey was that, despite the high level of general knowledge about AIDS among both rural and urban respondents, there are still misconceptions about how HIV is transmitted, and inadequate knowledge about how its transmission can be prevented. Strong support was expressed for HIV/AIDS educational programs in secondary schools and, in general, for helping persons with AIDS. On the other hand, negative attitudes towards persons with AIDS are widespread with the majority favoring separation from the community. Reduction in sex partners was identified as the primary strategy for avoiding AIDS. Condom usage rates are very low. Additional study needs to be done to determine why.

## II. Introduction

### A. Background Information on PCI

Project Concern International/PNG began activities in 1986 in response to a request from the National Department of Health with Matching Grant funding from USAID. After securing legal status, the initial project was launched in Kaiapit District of Morobe Province. The major focus of the program was the training of village women to serve as Village Birth Attendants (VBAs) who, in many cases, would provide the only trained assistance available to women in their communities during pregnancy and childbirth.

In 1990, PCI received funding from USAID's Child Survival VI program to expand the interventions and extend the initial project in Morobe Province. In 1993, the project was extended with Child Survival IX funding. Activities funded by this cooperative agreement include: 1) recruitment and training of VBAs in concert with the DOH and other organizations; 2) in-service training for Community Health Workers and Aide Post Orderlies; 3) training of HIV/AIDS health promoters; 4) supporting local theater groups for the dissemination of HIV/AIDS information; 5) conducting HIV/AIDS awareness activities, such as workshops and awareness campaign days; 6) training of VBA trainers; and 7) establishment of a Health Training Resources Center in Lae.

### B. HIV/AIDS in Papua New Guinea

AIDS has recently emerged as a major public health problem in Papua New Guinea which currently has the highest HIV infection rate in the Pacific region. As of November 1995, there were 335 confirmed cases of HIV infections. There have been 143 cases of AIDS resulting in 65 deaths. The Department of Health estimates that the actual number of infections may exceed 30,000.<sup>1</sup> In a country with a population of 4 million, this would mean a prevalence of almost one percent.

HIV infections have been reported in 13 of the country's 20 provinces, indicating that the virus has spread throughout a good portion of the

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<sup>1</sup> "HIV cases jump to 335 in PNG", The National, December 3, 1995.

country. In Morobe Province, 11 cases of HIV or AIDS have been reported.<sup>2</sup> Lae, the capital city of Morobe Province, has the busiest port facility in PNG and is also located at the end point of the Highlands Highway. Given its unique location at the crossroads of PNG, the city of Lae has a crucial role in preventing the further spread of HIV.

### C. Purpose of Survey

The purpose of the survey was to determine knowledge, awareness, and behavior relevant to HIV/AIDS prevention programs. The data collected by the survey will be utilized to determine achievement of the HIV/AIDS related project objectives included in the Detailed Implementation Plan (DIP). It will also provide important baseline data for future HIV/AIDS prevention programs in Morobe Province as well as other areas of Papua New Guinea.

The specific objectives of the survey were to measure:

- \* Awareness of and knowledge about HIV/AIDS and other sexually transmitted infections;
- \* Practices regarding condom usage;
- \* Attitudes towards persons with AIDS.

## III. Methodology

### A. Process

Introductory letters explaining the purpose and timing of the survey were delivered to the headman and the head of the village women's group in each rural village or urban settlement area. Health center staff also notified the village or settlement leaders in some cases. Whenever possible, a PCI staff member visited the village or urban settlement prior to the survey to speak personally with the local leaders. This was particularly important in the urban settlement areas where there were concerns about the safety of survey team members.

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<sup>2</sup> AIDS and HIV Quarterly Report, STD/AIDS Unit, Communicable Disease Control Section, PNG Department of Health, through September 30, 1995.

Four slightly different survey questionnaires were prepared:

- \* Urban HIV/AIDS questionnaire (female version)
- \* Urban HIV/AIDS questionnaire (male version)
  
- \* Rural HIV/AIDS questionnaire (male only)
- \* Rural Child Survival Knowledge, Practice and Coverage questionnaire including HIV/AIDS questions (female only)

Each of the questionnaires was translated into the national language, Tok Pisin. The questionnaires included questions not asked during previous surveys and, for this reason, were pretested several times prior to the survey.

#### B. Sample Size

PCI conducted different activities in rural and urban project areas. The focus of project activities in the urban areas (Lae city) was on HIV/AIDS prevention for men and women. In the rural areas activities included, in addition to HIV/AIDS, six additional maternal and child health (MCH) interventions (safe delivery, family planning, immunization, nutrition, control of diarrheal disease, and acute lower respiratory infections). For this reason, the survey sample for urban and rural women was somewhat different. (Refer to KPC Survey Report.)

In the rural areas, PCI randomly selected 30 clusters in 30 villages in a geographic area covering all ten census divisions in Kaiapit district and four census divisions in the coastal areas of Huon District. In each cluster PCI randomly selected ten men and ten women. The criterion for selecting both men and women was to be between the ages of 15 and 45. An additional criterion for selecting women was to have at least one child under the age of 24 months. The entire rural sample consisted of 300 women between the ages of 15 and 45 who had children under the age of 24 months, and 300 men between the ages of 15 and 45. In the rural sample, women were asked 26 questions relating to maternal and child health issues in addition to the 26 questions about HIV/AIDS. Rural men were asked 26 questions about HIV/AIDS.

Project activities in the urban areas were limited to HIV/AIDS prevention. As a result, PCI selected a smaller sample consisting of 150 men and 150 women between the ages of 15 and 45. As in the rural areas, PCI used a 30-

cluster sampling method to select the urban sample. In this case, 30 clusters were chosen from among 34 urban settlement areas with a total population of 31,778. For urban settlement areas with more than one cluster, various random methods were used to select the neighborhoods and households to be surveyed.

### C. Training

Training for nine supervisors and 18 interviewers was conducted in Lae from February 19 to March 1. The training was coordinated by Anne Kitoneka, PCI's Provincial Training Officer assisted by Jeff Billings, Technical Support Officer, PCI/San Diego. The training schedule included one day each for core team and supervisors' training. The supervisors included five PCI staff and four other community leaders or health workers who had been involved in previous PCI surveys. A list of the supervisors and interviewers can be found in Appendix B.

Nine teams were formed for the urban survey and eight for the rural survey. Each team included at least one male, either the team leader or one of the two interviewers. Most teams were composed of two females and one male. Team composition for the urban and rural HIV/AIDS surveys varied slightly. Due to local language differences, teams included, whenever possible, supervisors or interviewers originating from the general area of the clusters to be surveyed.

### D. Field Methods and Interviews

The surveys were carried out on a house to house basis. Upon arriving in the survey cluster site, a rough map was drawn with the assistance of community leaders. In order to determine the first household to be approached a location in front of the village or settlement church was chosen. Here, a member of the survey team spun a pen on a piece of paper, the direction in which it pointed, after coming to a rest, being the direction in which the team initially proceeded. From this central point, the team counted the number of houses along an axis going outwards toward the furthest edge of the village. A random number less than or equal to the number of houses along this axis ( $n$ ) was chosen by selecting numbers from a plastic bag. Using this number the team counted outwards from the center of the village. The  $n$ th house along this axis became the starting point for the cluster, i.e., the site of the first interview.

After the first household was chosen, it was initially determined if there was an appropriate individual to be interviewed. For the rural female survey, for example, it was determined if there was a child below two years of age in the household, and if the mother was present at the time. If so, the mother was interviewed. In cases where there was not a child below two years of age in the household, or the mother of an eligible child was not present, another household was sought. This was done by selecting the house whose front door was nearest the front door of the first house. Again, the family of this house was approached to determine if there was a child in the household who came within the scope of this survey, and so on, until ten mothers had been interviewed in that cluster.

In the case of the rural male and urban male/female surveys, there were different requirements for the persons to be interviewed. In the rural areas, the male member of the survey team utilized the same random method to determine a different starting point. It was then determined if there was a male aged 15-45 present. If so, this individual was interviewed. If not, another household was sought, again using the above method. In the urban areas, separate starting points were selected for males and females in each cluster, once again utilizing the above method. Several of the larger urban settlements contained more than one cluster. In these cases, upon arriving in the settlement, local leaders were consulted and, using census data, the settlement was divided into the required number of sub-divisions with approximately equal populations.

#### F. Data Analysis

Epi Info 6.0, created by WHO and the Centers for Disease Control in Atlanta, Georgia, was used for the preparation of the survey format and the analysis of the data.

IV. Survey Results

A. Awareness and Attitudes about AIDS

<b>Proportion of respondents who have heard of AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	94%	97%
<b>Female</b>	48%	89%
<b>Total</b>	71%	93%

<b>Proportion of respondents who think that people in their community are in danger of getting AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	38%	66%
<b>Female</b>	22%	61%
<b>Total</b>	30%	63%

<b>Proportion of respondents who think that children in grades 5-8 should be taught about AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	87%	96%
<b>Female</b>	63%	78%
<b>Total</b>	75%	87%

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<b>Proportion of respondents who, if someone in the community had AIDS, would be willing:</b>	<b>Rural</b>	<b>Urban</b>
To shake his/her hand.	32%	39%
To share a meal with him/her.	25%	35%
To get water from the same well.	27%	33%
To use the same toilet.	24%	33%

<b>Proportion of respondents who feel that people with AIDS:</b>	<b>Rural</b>	<b>Urban</b>
Should be isolated from non-infected people	86%	84%
Should be able to continue living in the community	24%	27%
Deserve what happened to them	9%	13%
Deserve our help	67%	67%

B. Knowledge about HIV Transmission

	<b>Measure of knowledge</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	Knew 2 ways HIV is transmitted	5%	7%
	Knew 1 way HIV is transmitted	37%	41%
<b>Female</b>	Knew 2 ways HIV is transmitted	3%	7%
	Knew 1 way HIV is transmitted	15%	42%

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<b>Proportion of respondents who believe AIDS can be spread by:</b>	<b>Rural</b>	<b>Urban</b>
Having sex with an infected person	32%	37%
An infected mother to her unborn child	4%	6%
Blood transfusions	6%	12%
Injections	7%	8%
Razor blades	7%	6%
Prostitution	69%	61%
Toilets	2%	3%
Shaking hands	2%	1%
Mosquitoes	3%	5%
Sharing utensils	4%	4%

<b>Proportion of respondents who believe there is a cure for AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	8%	19%
<b>Female</b>	7%	24%
<b>Total</b>	8%	21%

C. HIV/AIDS Prevention

	<b>Measure of knowledge</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	Knew 2 ways transmission is prevented	14 %	14%
	Knew 1 way transmission is prevented	63%	60%
<b>Female</b>	Knew 2 ways transmission is prevented	5%	13%
	Knew 1 way transmission is prevented	27%	48%

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<b>Proportion of respondents who believe that people can prevent themselves from getting AIDS by:</b>	<b>Rural</b>	<b>Urban</b>
Having few sex partners	54%	47%
Using condoms	16%	23%
Not sharing needles and syringes	8%	8%
Avoiding sex with prostitutes	44%	42%
Getting treatment for STDs	3%	6%

D. Personal Protective Measures

<b>Proportion of respondents who think that they personally are likely or very likely to get AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	12%	27%
<b>Female</b>	6%	17%
<b>Total</b>	9%	22%

<b>Proportion of respondents who doing something to protect themselves against AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	58%	78%
<b>Female</b>	31%	42%
<b>Total</b>	45%	61%

<b>Proportion of respondents who are protecting themselves against AIDS by:</b>	<b>Rural</b>	<b>Urban</b>
Having one faithful sex partners	68%	52%
Using condoms	26%	35%
Having fewer sex partners	2%	2%
Avoiding certain types of sex partners	35%	41%
Getting regular clinical check ups	2%	5%

E. Condom Use

<b>Proportion of respondents who know that condoms are used to prevent AIDS</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	86%	93%
<b>Female</b>	33%	59%
<b>Total</b>	60%	76%

<b>Proportion of respondents who know that a condom should only be used once</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	88%	87%
<b>Female</b>	59%	60%
<b>Total</b>	74%	75%

<b>Proportion of respondents who have ever used a condom</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	34%	34%
<b>Female</b>	16%	17%
<b>Total</b>	25%	27%

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<b>Proportion of respondents who used a condom each of the last three times he/she had sex</b>	<b>Rural</b>	<b>Urban</b>
<b>Male</b>	6%	7%
<b>Female</b>	0%	1%
<b>Total</b>	3%	4%

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## V. Discussion

Awareness about AIDS is high in both urban and rural areas with more than 90% of both urban respondents and rural males having heard about AIDS. Less than half of rural women, however, had heard of AIDS, a finding to be expected given the lower educational levels of village women. Meanwhile, awareness of the fatal nature of AIDS is evidenced by the finding that less than one-fifth of the respondents believe there is a cure for AIDS.

There was a significant difference between urban and rural respondents regarding the level of perceived danger from AIDS with twice as many urban dwellers feeling that their communities were vulnerable. It appears that more educational work needs to be done in rural areas.

Respondents expressed few objections to teaching school children in grades 5-8 (aged 13-16) about AIDS. This would seem to indicate a willingness to support expanded AIDS educational activities in schools.

One disturbing findings of the survey was the expression of negative feelings towards persons with AIDS. Clearly, the high proportion of respondents who have heard of AIDS, are getting negative and, possibly, incorrect information about AIDS, most likely from the popular media. Transmission of HIV is still associated primarily with prostitution, and less than 1/2 of respondents are able to identify modes of transmission. Programs may be needed to work with the popular media to improve reporting about AIDS.

The majority of respondents felt that persons with AIDS should be isolated and not allowed to continue living with the community. Approximately 2/3 were unwilling to shake hand, share meals, etc., with a person who has AIDS. On the other hand, there was little evidence of blame being placed on the person with AIDS, and a majority felt that persons with AIDS should be helped.

A high proportion of respondents identified having one faithful sex partner or avoiding certain types of sex partners as the best way to prevent AIDS. It is difficult to determine, however, whether this result is due to knowledge about the causes and prevention of AIDS, or to traditional values which may have "shamed" respondents into replying in the "proper" way.

Knowledge about condoms and their effectiveness as a means to prevent AIDS and other STDs is high, particularly among males. Condom usage rates, however, are still quite low. Additional studies to identify the specific barriers to increased condom usage need to be conducted.

- VI. Appendices
  - A. Survey Questionnaires
  - B. Survey Supervisors and Interviewers
  - C. List of Clusters

## **Appendix A. Survey Questionnaires**

Cluster No. \_\_\_\_\_

House No. \_\_\_\_\_

Interviewer \_\_\_\_\_

**FINAL HIV/AIDS SURVEY  
MALE**

1. How old were you on your last birthday? AGE IN YEARS \_\_\_\_\_
2. What was the highest educational level you attained?
  1. None
  2. Primary, does not read
  3. Primary, reads
  4. Secondary & higher
3. What is your marital status?
  1. Married
  2. Separated/Divorced/Widowed
  3. Never married
4. Do you have any children?
  1. Yes
  2. No (GO TO QUESTION 6)
5. How old is your youngest child?
  1. Two years or less
  2. More than two years
6. How long have you been living in Lae?  
YEARS \_\_\_\_\_ MONTHS \_\_\_\_\_  
99. Don't remember

**HIV/AIDS**

7. Have you ever heard of the disease called AIDS?
  1. Yes
  2. No (GO TO QUESTION 24)
8. Is there a cure for AIDS now?
  1. Yes
  2. No
  9. Don't know

9. How does AIDS spread?

	<u>Unprompted</u>	<u>Prompted</u>		<u>Don't</u>
	Yes	Yes	No	Know
a. By an infected mother to her unborn child?.....	1	2	3	4
b. From toilets?.....	1	2	3	4
c. By having sex with an infected person?.....	1	2	3	4
d. By shaking hands?.....	1	2	3	4
e. By prostitution?.....	1	2	3	4
f. From blood transfusions?.....	1	2	3	4
g. Through injections?.....	1	2	3	4
h. From mosquitoes?.....	1	2	3	4
i. From razor blades?.....	1	2	3	4
j. From sharing utensils?.....	1	2	3	4
k. Other _____	1			

10. Do you think that a person can be infected with AIDS but still look and feel healthy?

1. Yes
2. No
9. Don't know

11. Do you think that someone who looks healthy but is infected with AIDS can pass it on to other people?

1. Yes
2. No
9. Don't know

12. How can people prevent themselves from getting AIDS?

	<u>Unprompted</u>	<u>Prompted</u>		<u>Don't</u>
	Yes	Yes	No	Know
a. By having fewer sex partners?.....	1	2	3	4
b. By not sharing needles & syringes?.....	1	2	3	4
c. By using condoms?.....	1	2	3	4
d. By avoiding sex with prostitutes?.....	1	2	3	4
e. By getting treatment for STDs?.....	1	2	3	4
f. By avoiding skin piercing with unsterile instruments?.....	1	2	3	4
g. By washing regularly?.....	1	2	3	4
h. By having a good diet?.....	1	2	3	4
i. Other _____	1			

13. Do you think that people in this community are in danger of getting AIDS?  
 1. Yes  
 2. No  
 9. Don't know

14. How likely do you think you are of becoming infected with AIDS?  
 1. Very likely  
 2. Likely  
 3. Unlikely  
 4. Very unlikely  
 9. Don't know

15. Are you doing anything to protect yourself against AIDS?  
 1. Yes  
 2. No (GO TO QUESTION 17)

16. What are you doing to protect yourself against AIDS?  
 (MULTIPLE ANSWERS POSSIBLE)  
 a. Use condoms  
 b. Have one faithful sex partner  
 c. Have fewer sex partners  
 d. Avoid certain types of partners  
 e. Regular clinical check ups  
 f. Other \_\_\_\_\_

17. Should children in Grades 5-8 be taught about AIDS?  
 1. Yes  
 2. No  
 3. No opinion (GO TO QUESTION 19)

18. What is your reason? \_\_\_\_\_

19. If someone in your community had AIDS, would you be willing:  
 (READ EACH CHOICE)

	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. to shake his/her hand?.....	1	2	3
b. to share a meal with him/her?.....	1	2	3
c. to get water from the same well?.....	1	2	3
d. to use the same toilet?.....	1	2	3

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20. In your opinion:	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. Should people with AIDS be isolated from non-infected people?.....1	2	3	3
b. Should people with AIDS be able to continue living in the community?.....1	2	3	3
c. Should people with AIDS engage in sex?..... 1	2	3	3
d. Should people with AIDS travel to other provinces or countries?.....1	2	3	3
e. Should people with AIDS have children?.....1	2	3	3
f. Do people with AIDS deserve what happened to them?..... 1	2	3	3
g. Do people with AIDS deserve our help?.....1	2	3	3

**Project Exposure**

- 21. Are you aware of any community leaders who give talks about AIDS?
  - 1. Yes
  - 2. No (GO TO QUESTION 24)
  
- 22. Have you attended one of these talks?
  - 1. Yes
  - 2. No (GO TO QUESTION 24)
  
- 23. Who was this community leader? \_\_\_\_\_

**EXPLAIN SENSITIVE NATURE OF QUESTIONS AND RE-EMPHASIZE THE GUARANTEE OF CONFIDENTIALITY**

**Condoms & Sexual Practice**

- 24. What are condoms used for?
  - 1. Family planning
  - 2. Prevent AIDS or STDs
  - 3. Both family planning and AIDS prevention
  - 4. Other \_\_\_\_\_
  - 8. Never heard of condoms (GO TO QUESTION 30)
  - 9. Don't know (GO TO QUESTION 30)

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25. When should condoms be used?
- |   | Unprompted |    | Don't Know |    |
|---|------------|----|------------|----|
|   | Yes        | No | Yes        | No |
| a. Only with women other than your wife/regular partner?..... | 1          | 2  | 3          | 4  |
| b. Only with your wife/regular partner?...                    | 1          | 2  | 3          | 4  |
| c. Each time you have sex with any partner?                   | 1          | 2  | 3          | 4  |
| d. Other _____  | 1          |    |            |    |
26. Do you think that a condom should be used only once or can it be used more than once?
1. Once
  2. More than once
  9. Don't know
27. Have you ever used a condom? (PAUSE)
1. Yes
  2. No (GO TO QUESTION 30)
28. When was the last time you used a condom?
1. Within the past week
  2. Within the past month
  3. Within the past six months
  4. More than six months ago
  5. Never used a condom
  9. Don't remember.
29. Of the last three times you had sex, how many times did you use a condom? \_\_\_\_\_ (PROBE)
9. Don't know
30. During the past three months, did you have sex with anyone other than your wife/regular partner?
1. Yes
  2. No (GO TO END)
31. How many different women have you had sex with in the past 3 months? \_\_\_\_
99. Don't remember
32. The last time you had sex with someone other than your wife/regular partner did you use a condom?
0. NEVER USED A CONDOM
  1. Yes
  2. No -----> Did she ask you to use a condom?
    1. Yes
    2. No

Cluster No. \_\_\_\_\_  
 House No. \_\_\_\_\_  
 Interviewer \_\_\_\_\_

**FINAL HIV/AIDS SURVEY  
 MALE (Rural)**

1. How old were you on your last birthday? AGE IN YEARS \_\_\_\_\_
2. What was the highest educational level you attained?
  1. None
  2. Primary, does not read
  3. Primary, reads
  4. Secondary & higher
3. What is your marital status?
  1. Married
  2. Separated/Divorced/Widowed
  3. Never married

**HIV/AIDS**

4. Have you ever heard of the disease called AIDS?
  1. Yes
  2. No (GO TO QUESTION 21)
5. Is there a cure for AIDS now?
  1. Yes
  2. No
  9. Don't know

6.	How does AIDS spread?				<u>Don't</u>
		<u>Unprompted</u>	<u>Prompted</u>	<u>Know</u>	
		Yes	Yes	No	
	a. By an infected mother to her unborn child?.....	1	2	3	4
	b. From toilets?.....	1	2	3	4
	c. By having sex with an infected person?.....	1	2	3	4
	d. By shaking hands?.....	1	2	3	4
	e. By prostitution?.....	1	2	3	4
	f. From blood transfusions?.....	1	2	3	4
	g. Through injections?.....	1	2	3	4
	h. From mosquitoes?.....	1	2	3	4
	i. From razor blades?.....	1	2	3	4
	j. From sharing utensils?.....	1	2	3	4
	k. Other _____	1			

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7. Do you think that a person can be infected with AIDS but still look and feel healthy?
1. Yes
  2. No
  9. Don't know

8. Do you think that someone who looks healthy but is infected with AIDS can pass it on to other people?
1. Yes
  2. No
  9. Don't know

9. How can people prevent themselves from getting AIDS?

	<u>Unprompted</u>	<u>Prompted</u>		<u>Don't Know</u>
	Yes	Yes	No	
a. By having fewer sex partners?.....	1	2	3	4
b. By not sharing needles & syringes?	1	2	3	4
c. By using condoms?.....	1	2	3	4
d. By avoiding sex with prostitutes?.....	1	2	3	4
e. By getting treatment for STDs?.....	1	2	3	4
f. By avoiding skin piercing with unsterile instruments?.....	1	2	3	4
g. By washing regularly?.....	1	2	3	4
h. By having a good diet?.....	1	2	3	4
i. Other _____	1			

10. Do you think that people in this community are in danger of getting AIDS?
1. Yes
  2. No
  9. Don't know

11. How likely do you think you are of becoming infected with AIDS?
1. Very likely
  2. Likely
  3. Unlikely
  4. Very unlikely
  9. Don't know

12. Are you doing anything to protect yourself against AIDS?
1. Yes
  2. No (GO TO QUESTION 14)

13. What are you doing to protect yourself against AIDS?  
(MULTIPLE ANSWERS POSSIBLE)

- a. Use condoms
- b. Have one faithful sex partner
- c. Have fewer sex partners
- d. Avoid certain types of partners
- e. Regular clinical check ups
- f. Other \_\_\_\_\_

14. Should children in Grades 5-8 be taught about AIDS?

- 1. Yes
- 2. No
- 3. No opinion (GO TO QUESTION 16)

15. What is your reason? \_\_\_\_\_

16. If someone in your community had AIDS, would you be willing:  
(READ EACH CHOICE)

	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. to shake his/her hand?.....	1	2	3
b. to share a meal with him/her?.....	1	2	3
c. to get water from the same well?.....	1	2	3
d. to use the same toilet?.....	1	2	3

17. In your opinion:

	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. Should people with AIDS be isolated from non-infected people?.....	1	2	3
b. Should people with AIDS be able to continue living in the community?.....	1	2	3
c. Should people with AIDS engage in sex?.....	1	2	3
d. Should people with AIDS travel to other provinces or countries?.....	1	2	3
e. Should people with AIDS have children?.....	1	2	3
f. Do people with AIDS deserve what happened to them?.....	1	2	3
g. Do people with AIDS deserve our help?.....	1	2	3

**Project Exposure**

18. Are you aware of any community leaders who give talks about AIDS?

- 1. Yes
- 2. No (GO TO QUESTION 21)

19. Have you attended one of these talks?  
 1. Yes  
 2. No (GO TO QUESTION 21)

20. Who was this community leader? \_\_\_\_\_

**EXPLAIN SENSITIVE NATURE OF QUESTIONS AND RE-EMPHASIZE THE GUARANTEE OF CONFIDENTIALITY**

**Condoms & Sexual Practice**

21. What are condoms used for?  
 1. Family planning  
 2. Prevent AIDS or STDs  
 3. Both family planning and AIDS prevention  
 4. Other \_\_\_\_\_  
 8. Never heard of condoms (GO TO QUESTION 27)  
 9. Don't know (GO TO QUESTION 27)

22. When should condoms be used?

	<u>Unprompted</u>		<u>Prompted</u>		<u>Don't Know</u>
	Yes	Yes	No		
a. Only with women other than your wife/regular partner?.....	1	2	3	4	
b. Only with your wife/regular partner?...	1	2	3	4	
c. Each time you have sex with any partner?	1	2	3	4	
d. Other _____.....	1				

23. Do you think that a condom should be used only once or can it be used more than once?  
 1. Once  
 2. More than once  
 9. Don't know

24. Have you ever used a condom? (PAUSE)  
 1. Yes  
 2. No (GO TO QUESTION 27)

25. When was the last time you used a condom?  
 1. Within the past week  
 2. Within the past month  
 3. Within the past six months  
 4. More than six months ago  
 5. Never used a condom  
 9. Don't remember.

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26. Of the last three times you had sex, how many times did you use a condom? \_\_\_\_\_ (PROBE)  
9. Don't know
27. During the past three months, did you have sex with anyone other than your wife/regular partner?  
1. Yes  
2. No (GO TO END)
28. How many different women have you had sex with in the past 3 months? \_\_\_  
99. Don't remember
29. The last time you had sex with someone other than your wife/regular partner did you use a condom?  
0. NEVER USED A CONDOM  
1. Yes  
2. No -----> Did she ask you to use a condom?  
1. Yes  
2. No

Cluster No. \_\_\_\_\_  
House No. \_\_\_\_\_  
Interviewer \_\_\_\_\_

**FINAL KNOWLEDGE, PRACTICE & COVERAGE (KPC) SURVEY  
MOTHERS**

**ALL QUESTIONS ARE TO BE ADDRESSED TO THE MOTHER (WOMEN 15-45  
YEARS OLD) WITH A CHILD UNDER TWO (LESS THAN 24 MONTHS OLD)**

1. How old were you on your last birthday? AGE IN YEARS \_\_\_\_\_
2. What was the highest educational level you attained?
  1. None
  2. Primary, does not read
  3. Primary, reads
  4. Secondary & higher
3. What is your marital status?
  1. Married
  2. Separated/Divorced/Widowed
  3. Never married
4. Name and age of the child under two years old  
(IF MORE THAN ONE CHILD, SELECT THE YOUNGEST)  
  
NAME \_\_\_\_\_ AGE IN MONTHS \_\_\_\_\_  
  
BIRTH DATE \_\_\_\_/\_\_\_\_/\_\_\_\_ (dd/mm/yy)

**Breast Feeding/Nutrition**

5. Are you breast feeding (*name of child*)?
  1. Yes (GO TO QUESTION 7)
  2. No
6. Have you ever breast fed (*name of child*)?
  1. Yes
  2. No
7. a. Are you giving (*name of child*) water or coconut water?
  1. Yes
  2. No
  9. Don't know

**HIV/AIDS**

27. Have you ever heard of the disease called AIDS?

- 1. Yes
- 2. No (GO TO QUESTION 44)

28. Is there a cure for AIDS now?

- 1. Yes
- 2. No
- 9. Don't know

29. How does AIDS spread?

	<u>Unprompted</u>	<u>Prompted</u>	<u>Don't</u>	<u>Know</u>
	Yes	Yes	No	
a. By an infected mother to her unborn child?.....	1	2	3	4
b. From toilets?.....	1	2	3	4
c. By having sex with an infected person?.....	1	2	3	4
d. By shaking hands?.....	1	2	3	4
e. By prostitution?.....	1	2	3	4
f. From blood transfusions?.....	1	2	3	4
g. Through injections?.....	1	2	3	4
h. From mosquitoes?.....	1	2	3	4
i. From razor blades?.....	1	2	3	4
j. From sharing utensils?.....	1	2	3	4
k. Other _____	1			

30. Do you think that a person can be infected with AIDS but still look and feel healthy?

- 1. Yes
- 2. No
- 9. Don't know

31. Do you think that someone who looks healthy but is infected with AIDS can pass it on to other people?

- 1. Yes
- 2. No
- 9. Don't know

32. How can people prevent themselves from getting AIDS?

	<u>Unprompted</u>	<u>Prompted</u>	<u>Don't</u>	<u>Know</u>
	Yes	Yes	No	
a. By having fewer sex partners?.....	1	2	3	4
b. By not sharing needles & syringes? 1	1	2	3	4
c. By using condoms?.....	1	2	3	4
d. By avoiding sex with prostitutes?..	1	2	3	4

- e. By getting treatment for STDs?..... 1 2 3 4
- f. By avoiding skin piercing with unsterile instruments?..... 1 2 3 4
- g. By washing regularly?..... 1 2 3 4
- h. By having a good diet?..... 1 2 3 4
- i. Other \_\_\_\_\_1

33. Do you think that people in this community are in danger of getting AIDS?  
 1. Yes  
 2. No  
 9. Don't know

34. How likely do you think you are of becoming infected with AIDS?  
 1. Very likely  
 2. Likely  
 3. Unlikely  
 4. Very unlikely  
 9. Don't know

35. Are you doing anything to protect yourself against AIDS?  
 1. Yes  
 2. No (GO TO QUESTION 37)

36. What are you doing to protect yourself against AIDS?  
 (DO NOT READ OPTIONS)

	<u>Yes</u>	<u>No</u>
a. Use condoms.....	1	2
b. Have one faithful sex partner.....	1	2
c. Have fewer sex partners.....	1	2
d. Avoid certain types of partners.....	1	2
e. Regular clinical check ups.....	1	2
f. Other _____	1	

37. Should children in Grades 5-8 be taught about AIDS?  
 1. Yes  
 2. No  
 9. No opinion (GO TO QUESTION 39)

38. What is your reason? \_\_\_\_\_

39. If someone in your community had AIDS, would you be willing:  
 (READ EACH CHOICE)

	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. to shake his/her hand?.....	1	2	3
b. to share a meal with him/her?.....	1	2	3
c. to get water from the same well?.....	1	2	3
d. to use the same toilet?.....	1	2	3

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40. In your opinion:	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>
a. Should people with AIDS be isolated from non-infected people?.....	1	2	3
b. Should people with AIDS be able to continue living in the community?.....	1	2	3
c. Should people with AIDS engage in sex?...	1	2	3
d. Should people with AIDS travel to other provinces or countries?.....	1	2	3
e. Should people with AIDS have children?...	1	2	3
f. Do people with AIDS deserve what happened to them?.....	1	2	3
g. Do people with AIDS deserve our help?....	1	2	3

**Project Exposure**

41. Are you aware of any community leaders who give talks about AIDS?  
 1. Yes  
 2. No (GO TO QUESTION 44)
42. Have you attended one of these talks?  
 1. Yes  
 2. No (GO TO QUESTION 44)
43. Who was this community leader? \_\_\_\_\_

**EXPLAIN SENSITIVE NATURE OF QUESTIONS AND RE-EMPHASIZE THE GUARANTEE OF CONFIDENTIALITY**

**Condoms & Sexual Practice**

44. What are condoms used for? (MULTIPLE ANSWERS POSSIBLE)
1. Family planning
  2. Prevent AIDS or STDs
  3. Both family planning and AIDS prevention
  4. Other \_\_\_\_\_
  8. Never heard of condoms (GO TO QUESTION 50)
  9. Don't know (GO TO QUESTION 50)

45. When should condoms be used?
- |  | <u>Unprompted</u> | <u>Prompted</u> | <u>Don't Know</u> |   |
|--|-------------------|-----------------|-------------------|---|
|  | Yes               | Yes             | No                |   |
| a) Only with men other than your husband/regular partner?..... | 1                 | 2               | 3                 | 4 |
| b) Only with your husband/regular partner?...                  | 1                 | 2               | 3                 | 4 |
| c) Each time you have sex with any partner?                    | 1                 | 2               | 3                 | 4 |
| d) Other _____   | 1                 |                 |                   |   |
46. Do you think that a condom should be used only once or can it be used more than once?
- Once
  - More than once
  - Don't know
47. Have you ever used a condom? (PAUSE)
- Yes
  - No (GO TO QUESTION 50)
48. When was the last time you used a condom?
- Within the past week
  - Within the past month
  - Within the past six months
  - More than six months ago
  - Never used a condom
  - Don't remember.
49. Of the last three times you had sex, how many times did you use a condom? \_\_\_\_\_ (PROBE)
- Don't know
50. During the past three months, did you have sex with anyone other than your husband/regular partner?
- Yes
  - No (GO TO END)
51. How many different men have you had sex with in the past 3 months? \_\_\_\_\_
- Don't remember
52. The last time you had sex with someone other than your husband/regular partner did you use a condom?
- NEVER USED A CONDOM
  - Yes
  - No ----> Did you ask him to use a condom?
    - Yes
    - No

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**Appendix B. Survey Supervisors and Interviewers**

## **SURVEY SUPERVISORS AND INTERVIEWERS HIV/AIDS Survey**

### **Urban Survey Teams**

Team 1: Papuan Compound, Kapiak	Giro Dei, Supervisor Esther Yawasing Nganining Waekisa
Team 2: Tent City	Martha Lucas, Supervisor Ayung Gamba Siling Penu
Team 3: West Taraka	Robert Awai, Supervisor Koniel Ogou Wagatora Sogimo
Team 4: East Taraka	Phillip Posanau, Supervisor Zikina Zewango James Mintik
Team 5: Buimo, Nawae, Boudry Road	Mana Itama, Supervisor Billy Mileng Rosemary Itamar
Team 6: Bumbu	Warito Yasi, Supervisor Nathan Ruth Cornelius
Team 7: Pepsi, 2nd Seven, Bumayong	Muwete Gatsia, Supervisor Muarutz Yasasa Gabriel Awateng
Team 8: Kamkumung Corner & Market	Mandy Namis, Supervisor Enike Garth Abel Aaron
Team 9: Hunter, Bowali	Jeffery Magas, Supervisor Tony Randol Lydia Ephraim

## Rural Survey Teams

Team 1: Buansing, Laukanu	Giro Dei, Supervisor Esther Yawasing Abel Aaron
Team 2: Bugang, Tamigidu, Yambo	Martha Lucas, Supervisor Ayung Gamba Siling Penu
Team 3: Ana, Maiama, Ainse, Kobo, Zare	Phillip Posanau, Supervisor Zikina Zewango Koniel Ogou Wagatora Sogimo
Team 4: Siaga, Singas, Guruf	Mana Itama, Supervisor Billy Mileng Rosemary Itamar
Team 5: Arawik, Ginonga, Matap, Yo-Parengan	Warito Yasi, Supervisor Nathan Yawising Nganining Waekisa
Team 6: Arifiran, Gantisap, Zumim Mutzing, Sangan	Muwete Gatsia, Supervisor Muarutz Yasasa Gabriel Awateng
Team 7: Maiamzaring, Tofmora, Som Mutzing Urban	Mandy Namis, Supervisor Enike Garth Ruth Cornelius
Team 8: Mararassa, Raginam, Wankun #2, Numbugu	Jeffery Magas, Supervisor Tony Randol Lydia Ephraim Robert Awai

**Appendix C. List of Clusters**

**LIST OF CLUSTERS**  
**HIV/AIDS Survey**

<u>Settlement</u>	<u>Total Population</u>	<u>Number of Clusters</u>
1. Papuan Compound	1,606	2
2. Tent City	1,840	3
3. West Taraka	2,310	3
4. East Taraka	2,332	3
5. Buimo Road	804	1
6. Nawai Block	626	1
7. Boundary Road	652	1
8. Bumbu	3,532	5
9. Bepsy Compound	266	1
10. 2nd Seven	636	1
11. Bumayong	1,780	2
12. Kamkumung Corner	1,902	2
13. Kamkumung Market	628	1
14. Hunter	1,687	2
15. Bowali	662	1
16. Kapiak Street	1,248	1