

**A REVIEW OF THE USE  
OF  
LAY COUNSELLORS  
AND  
RAPID HIV TESTS  
  
IN A VOLUNTARY COUNSELLING  
AND TESTING SERVICE  
  
IN UGU SOUTH ProTEST PILOT  
SITE.**

by  
**LAURA CAMPBELL**

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Declaration.

I, Laura Campbell

Declare that this work has been carried out by myself. I have had supervision from Professor C.C Jinabhai, DR S Knight, DR H Hausler and DR Mark Colvin. I collated the data and this report was compiled unaided. This work has not been submitted to any other university.

Signed

A handwritten signature in black ink, appearing to read 'L. Campbell', written over the word 'Signed'.

Date: 19-11-2002

Place: Port Shepstone.

Dedication.

I dedicate this submission to my family.

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I would like to thank the following people for their support:

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DR M Colvin

DR H Hausler

All staff at health facilities in UGU South

All staff at South Coast Hospice.

List of abbreviations

|         |   |
|---------|---|
| AIDS    | Acquired Immuno Deficiency Syndrome               |
| ANC     | Antenatal Clinic                                  |
| ATTIC   | Aids Training, Information and Counselling Center |
| CHW     | Community Health Worker                           |
| DOH     | Department of health                              |
| DOTS    | Directly Observed Treatment for TB (Short Course) |
| ELISA   | Enzyme Linked Immunosorbent assay                 |
| HIV     | Human Immunodeficiency virus                      |
| HACS    | HIV/AIDS Educators                                |
| MTCT    | Mother-to-child transmission                      |
| MRC     | Medical Research Council                          |
| NGO     | Non Governmental Organization                     |
| OPD     | Out Patient Department                            |
| ProTEST | Initiative to Promote testing for HIV             |
| SANTA   | South African National Association for TB         |
| STI     | Sexually transmitted infection                    |
| TB      | Tuberculosis                                      |
| UNAIDS  | The Joint United Programme on HIV/AIDS            |
| VCT     | Voluntary Counselling and Testing                 |
| WHO     | World Health Organization                         |

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# ABSTRACT

This study aimed to review the use of lay counsellors and rapid HIV tests in a voluntary testing and counselling (VCT) service in the UGU South health district of KwaZulu Natal. The study ran from September 1999 to April 2001.

In early 1999, UGU South was selected as a pilot site as part of an international initiative. This initiative aimed to promote testing for HIV by using VCT service as an entry point into a range of HIV/AIDS and TB prevention and care programmes and was termed the ProTEST Initiative. Four such ProTEST sites were developed in South Africa and all offered rapid HIV testing and prophylactic drugs (Isoniazid and Cotrimoxazole) for HIV infected people. VCT was prioritised at all sites, however UGU South was unique in providing lay counsellors. Traditionally a lay counsellor (who is not a trained health care worker), offered only pre and post- test counselling. Lay counsellors had been used in South Africa, however their impact had not been formally assessed. In accordance with the Health Professional Council ruling on testing blood, lay counsellors could not carry out a rapid HIV test procedure. The decision to use lay counsellors in UGU South, was based on a review of the capacity of existing health care workers to expand a VCT service. Ten female lay counsellors, who fulfilled pre-employment selection criteria, were employed.

In 1999, VCT was prioritised by the South African Department of Health and a Strategic Plan on HIV/AIDS & STDs was developed. The aim was to test 12.5% of the adult population for HIV before the year 2005. The proposed VCT service was to be based at health facilities and was to utilize existing health care workers. The capacity of existing health care workers to cope with an expansion in VCT services had not been explored. The reasons why clients accessed VCT and the demographic profiles of such clients were poorly understood. The Department of Health also planned to use rapid HIV tests at health facilities. Literature on the use of rapid HIV tests in South Africa was limited. This study aimed to address gaps in knowledge around VCT in South Africa and specific objectives were to:

- \*Assess the capacity of existing health care workers to expand a VCT service
- \*Review the need for rapid HIV tests
- \*Develop and evaluate a training, support and mentorship programme for lay counsellors
- \*Review the reason why clients use a VCT service and the demographic profiles of such clients
- \*Monitor the impact of lay counsellors on numbers of cases of TB diagnosed and treated
- \*Make recommendations for the use of lay counsellors and rapid HIV tests in an expanded integrated HIV/TB Control Programme.

The study was prospective, descriptive and was based at ten health facilities in UGU South. The health facilities offered counselling, rapid HIV tests and prophylaxis for HIV infected people (Isoniazid or Cotrimoxazole). The study population was all nurses, lay counsellors and clients involved with the VCT service at these sites. Both qualitative and quantitative methods of study were employed in this study including:

- \*Postal survey
- \*Interviews
- \*Focus group discussion
- \*Review of patient records, literature and questionnaires
- \*Analysis of registers from the National TB Control Programme.

Results from three independent reviews clearly indicated that nurses in UGU South did not have the capacity to offer an expanded VCT service due to a heavy workload commitment. The nurses considered that VCT was a necessary service and supported the introduction of lay counsellors.

Quantitative reviews concluded that a third of people tested for HIV using a hospital based testing system never returned for their results and that the turn-around time for an HIV test result was as much as three weeks. Rapid HIV tests increased access to an HIV test result and were acceptable to health care workers. There was no review of the opinions of clients on the rapid HIV tests.

A training, support and mentorship programme was developed for lay counsellors and both nurses and counsellors considered that the programme was largely effective. The lay counsellors were trained to offer a more comprehensive service than traditional lay counsellors; in particular lay counsellors were expected to screen clients for symptoms of TB disease and support clients taking TB medication. Evaluation of the programme concluded that the content should be more practical and there should be a dedicated supporter for the lay counsellors available at their place of work.

Results suggested that access to VCT services increased due to the presence of lay counsellors. The lay counsellors were acceptable to health staff, however there was no review of the opinions of clients on the lay counsellors. Half of the 7 475 people tested were infected with HIV. Most clients were medically referred for VCT and had "AIDS defining" illnesses. The clients who self-referred were ill or knew someone who had died recently. The proportion of clients who self-referred increased and health education was the main reason why people self-presented. More women than men were tested and women were more likely to test HIV positive. Review of the TB registers indicated that the TB Control Programme in UGU South was not optimal. The impact of lay counsellors on numbers of TB cases diagnosed and on treatment could not be determined from this study.

Before the use of lay counsellors is expanded, there should further review of the capacity of other health care workers to offer VCT. Issues such as conditions of employment, salaries and a job description for lay counsellors should be clarified. There should be an independent assessment of the quality of counselling offered and a review of the cost of the lay counsellors. The impact of using men and younger lay counsellors should be reviewed. VCT services should be based at clinics, rather than hospitals and consideration should be given to developing freestanding VCT sites. Education programmes on VCT should be expanded beyond health facilities. Prior to expanding the use of rapid HIV tests, there should be a review of the cost of rapid HIV tests and systems should be in place for ordering, delivery and for stock control. The opinions of clients on rapid HIV testing should be ascertained. Consideration should be given to lay counsellors performing the rapid HIV test or an alternative method of testing (not involving blood) should be introduced.

There should be ongoing training in TB and monitoring of the TB Control Programme in UGU South. Specific indicators should be developed to monitor the impact of lay counsellors on the diagnosis and treatment of TB and to measure collaboration between HIV/AIDS and TB Control Programmes.

# CHAPTER 1

**Aims**

**Objectives**

**Background**

This chapter outlines the aims and objectives of this study and in order to provide a context for the study, a background to the concept of the ProTEST Initiative is outlined. The study was carried out in the UGU South ProTEST pilot site and geographical and demographic details on this site are summarised. The study reviewed the use of lay counsellors in a VCT service and the rationale for using lay counsellors is presented. The ProTEST pilot sites offered rapid testing for HIV and information pertaining to rapid HIV tests is included.

### 1.1 Aim of the study.

This study aimed to assess the impact of using lay counsellors and rapid HIV tests in a VCT service in the UGU South ProTEST pilot site, KwaZulu Natal.

### 1.2 Objectives of the study

The specific objectives of the study are outlined as follows.

- \* Assess the capacity of existing health care workers to expand a VCT service,
- \* Review the need for rapid HIV tests,
- \* Develop a training, mentorship and support programme for lay counsellors and determine the effectiveness of this programme,
- \* Ascertain whether the use of lay counsellors increases access to VCT,
- \* Determine the reasons why clients access a VCT service and the demographic profiles and medical diagnosis of these clients,
- \* Monitor the numbers of cases of TB infection diagnosed and the numbers of TB clients who complete their treatment following introduction of lay counsellors,
- \* Make recommendations for the use of lay counsellors and rapid HIV testing in an expanded, integrated HIV/TB control programme.

### 1.3 Background to the study.

#### Background to the development of ProTEST Initiative.

The ProTEST Initiative was initiated in 1999 and is based on the concept of interrupting the sequence of events by which HIV fuels the TB epidemic and promotes increased collaboration between HIV and TB Control Programmes, (further details on the development of the ProTEST Initiative are outlined in the literature review). The ProTEST Initiative was facilitated by the World Health Organization (WHO) and aimed to promote VCT as a means of providing a more coherent response to TB in high HIV prevalence settings. The name ProTEST reflects the promotion of HIV testing through VCT as an entry point for access to HIV and TB prevention and care.

As part of the ProTEST Initiative, pilot sites were developed to coordinate research aimed at determining methods to increase collaboration between HIV/AIDS and TB Control Programmes. It was planned that lessons learnt at pilot sites would be incorporated into a roll out programme, which will lead to an expanded, integrated HIV/TB Control Programme. All ProTEST sites prioritised VCT and all offered rapid HIV tests and prophylaxis for HIV positive people (this is discussed further in the literature review). Since 1999 ProTEST pilot sites have been established in South Africa, Malawi, Botswana, Zambia, Zimbabwe. There were four sites developed in South Africa:

|                |               |
|----------------|---------------|
| UGU South      | KwaZulu Natal |
| Langa          | Cape Town     |
| East London    | Eastern Cape  |
| Bushbuck Ridge | Mpumalanga.   |

The South African ProTEST pilot sites were funded by the South African National Department of Health (DOH), with assistance from the Belgian government. The pilots were planned to run from April 1999 until April 2001. A criteria for selection as a ProTEST pilot site was that there was a well functioning TB Control Programme in the health district.

### Background to UUG South ProTEST Pilot Site.

In early 1999 UGU South was selected as a ProTEST pilot site by a delegation from the South African National DOH and this study was based in this pilot site. UGU South is in the province of KwaZulu Natal. Appendix 1 provides an overview of geographical and population profiles and indicates the HIV prevalence in UGU South. Appendix 2 indicates the position of health facilities in the district.

A summary of the appendices indicates that in 1999, UGU South was estimated to have a population of 290 000 people. It is situated on the east coast of South Africa approximately one hour south of the City of Durban. There is one regional hospital (Port Shepstone) and two district hospitals (Murchison and St Andrews). There are twenty-five Primary Health Care (PHC) clinics. In 1999 the HIV prevalence was estimated as 32%.

In 1999 a tender was awarded to a non- governmental organization (NGO)- South Coast Hospice- to administer the ProTEST site and a full time pilot coordinator (the researcher) was employed. The tender specified that an expanded VCT service should be developed. A pilot task team was established in UGU South. Members on this task team included the Regional HIV/AIDS Director, health facility supervisors, the researcher and representatives from South Coast Hospice. This task team reviewed the capacity of existing health staff to cope with an expanded VCT service (the review is presented in the results section pages 29-30). Based on this review, the team concluded that an additional category of worker was required to carry out the expansion in VCT service required by a ProTEST pilot site. In response to the task teams' findings, the use of lay counsellors was planned. This site was unique among the South African sites, in using lay counsellors in the VCT service. The other South African pilot sites used existing health staff for counselling. South Coast Hospice paid the lay counsellors R 1200 per month (with no pension or Medical Aid). The task team used the following selection criteria for choosing the lay counsellors:

The counsellor had to:

- Have the ability to speak, read and write English.
- Have some knowledge of HIV/AIDS, preferably having attended a training course.
- Be an active volunteer working at a health facility.
- Be acceptable to the local community and health staff.

A matriculation was not a prerequisite.



#### Characteristics of lay counsellors selected.

Ten volunteers satisfied the above criteria and were selected by the task team. The volunteers were all female and the average age was 38 years (range 20- 45 years). Only one lay counsellor had a matriculation. The task team decided that the lay counsellors should wear a blue apron to distinguish them from nurses. Each lay counsellors was to have a name badge specifying their role as a lay counsellor.

#### 1.4 Presentation of the study.

This study is presented in the following four chapters:

- \* Chapter 1. A literature review outlines the rationale for the study.
- \* Chapter 2. The methods and indicators used in the study are described.
- \* Chapter 3. Results pertaining to the objectives of the study are presented.
- \* Chapter 4. Discussion, conclusions and recommendations arising from the results are outlined.

## **CHAPTER 2**

### **LITERATURE REVIEW**

This literature review considers the contributions of lay counsellors in improving access to VCT to address the burden of disease associated with HIV/AIDS and TB. The rationale for using lay counsellors and rapid HIV tests is outlined.

### 2.1 Interaction between HIV and TB diseases.

In 2000 the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimated a worldwide prevalence of HIV/AIDS as 34.3 million people.<sup>1</sup> It was estimated that 24.5 million of those infected, (71%), lived in sub-Saharan Africa and that approximately one third were co-infected with tuberculosis (TB).<sup>2,3</sup> Studies have indicated that TB may be associated with an acceleration in HIV disease progression and is a leading killer in people living with HIV.<sup>4,5</sup> Conversely, HIV infection promotes progression of latent TB to active TB and increases the risk of acquiring new TB infection.<sup>6,7</sup> Up to half of the people with HIV develop TB and HIV has a negative impact on the clinical course of TB.<sup>8</sup>

TB and HIV Control Programmes should therefore share mutual concerns and strategies. Since HIV drives the TB epidemic, prevention of HIV should be a priority for a TB Control Programme. Since up to half of the people with HIV develop TB and TB may have an adverse effect on HIV progression, TB care and prevention should be a priority concern of an HIV programme.

Over the last ten years the need for an interaction between HIV and TB Control Programmes has been highlighted in the literature. In 1991, Jos Perriens (UNAIDS), stated that “given the profound impact of the HIV infection on the incidence and clinical course of TB, close collaboration between HIV and TB control programmes is essential”.<sup>9</sup> In 1997, UNAIDS stated that the “dual epidemic requires a dual strategy”.<sup>10</sup> The need for interaction between TB and HIV/AIDS programmes is clear, however there is little published on specific ways in which the TB and HIV programmes should interact. If interaction has occurred it appears to be difficult to quantify.<sup>11</sup> Identifying ways to yield the benefits of increased collaboration requires both policy analysis and operational analysis on the ground. Policy analysis is useful to identify the barriers, which may have hindered effective collaboration.

Publications that are available on collaboration at a national and international level are limited and indicate that interaction is largely ineffective.<sup>12</sup> In Africa, policy responses to collaboration appears to be slow. De Cock suggests this may be because “TB control programmes have not adapted to the realities of an HIV/AIDS era”.<sup>13</sup> Ainsworth suggests that “there has been a reluctance by national governments to take full responsibility for HIV prevention and that governments and international agencies have failed to set realistic priorities”.<sup>14</sup>

In South Africa there has been a move by the National DOH to integrate TB and HIV programmes. A technical advisor for TB/HIV was appointed in 1997.

The literature available on collaboration concentrates more on operational research. In Uganda a project examining joint information messages for HIV and TB showed a significant improvement in knowledge of both HIV and TB.<sup>15</sup> This research also suggested that linking TB and HIV health education methods may lead to improved TB case finding. In Malawi HIV positive health care workers are offered Isoniazid as prevention for TB.<sup>16</sup> This links the HIV and TB programmes on a small scale.

The literature available on operational research is also limited and it appears that for many years those involved primarily with tackling TB, and those involved with tackling HIV, have largely followed separate courses and have developed separate programmes. Those involved with TB have concentrated on implementing the recommended TB control strategy based on case finding and cure. Those involved with HIV have concentrated on HIV prevention and more recently, with anti-retroviral drugs.

The current TB control strategy targets the final step in a sequence of events by which HIV fuels TB, (the transmission of *Mycobacterium Tuberculosis*). The sequence of events leading to TB in HIV positive people and interventions available to interrupt this sequence are illustrated in Figure 1.<sup>17</sup>

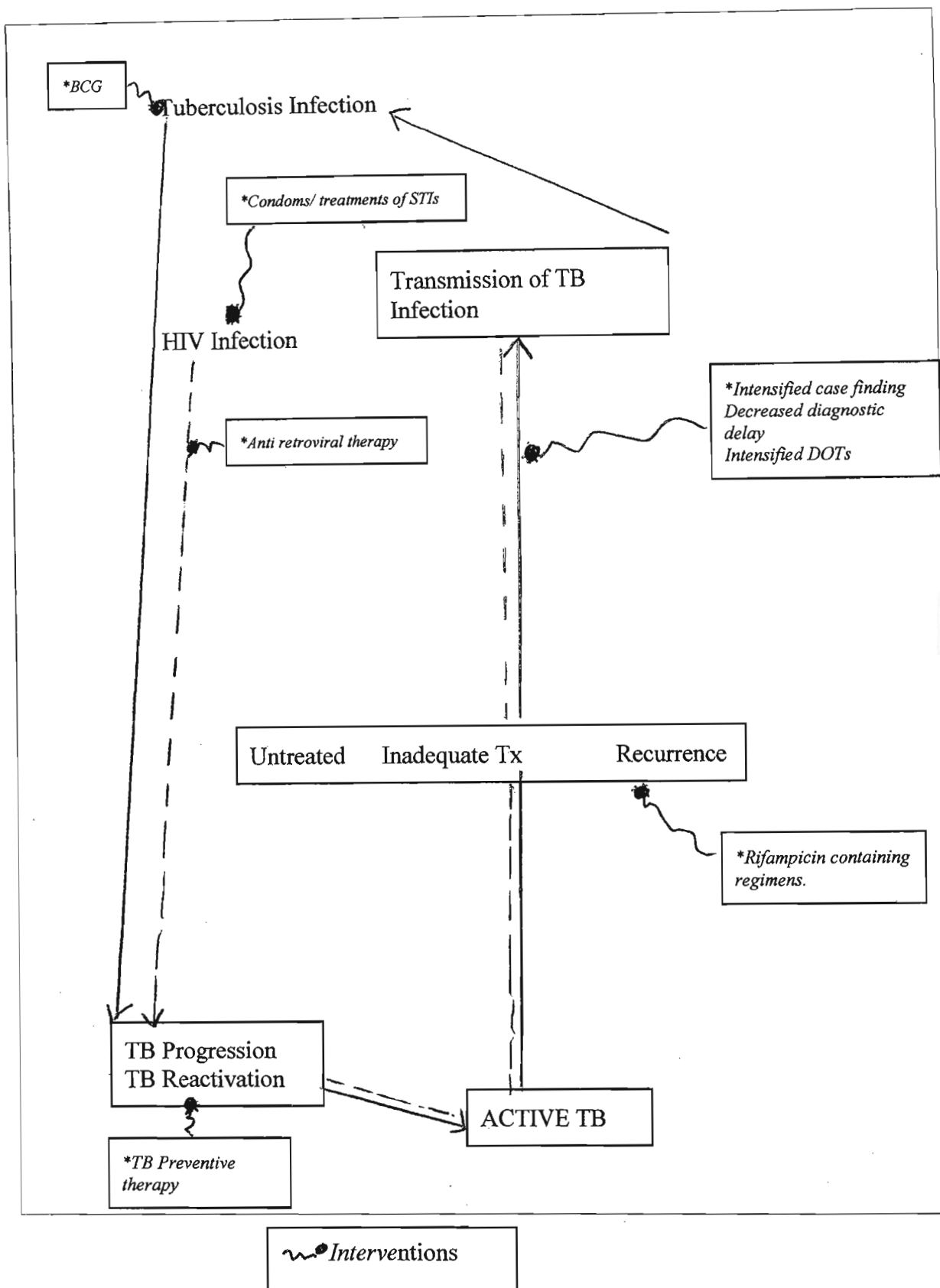
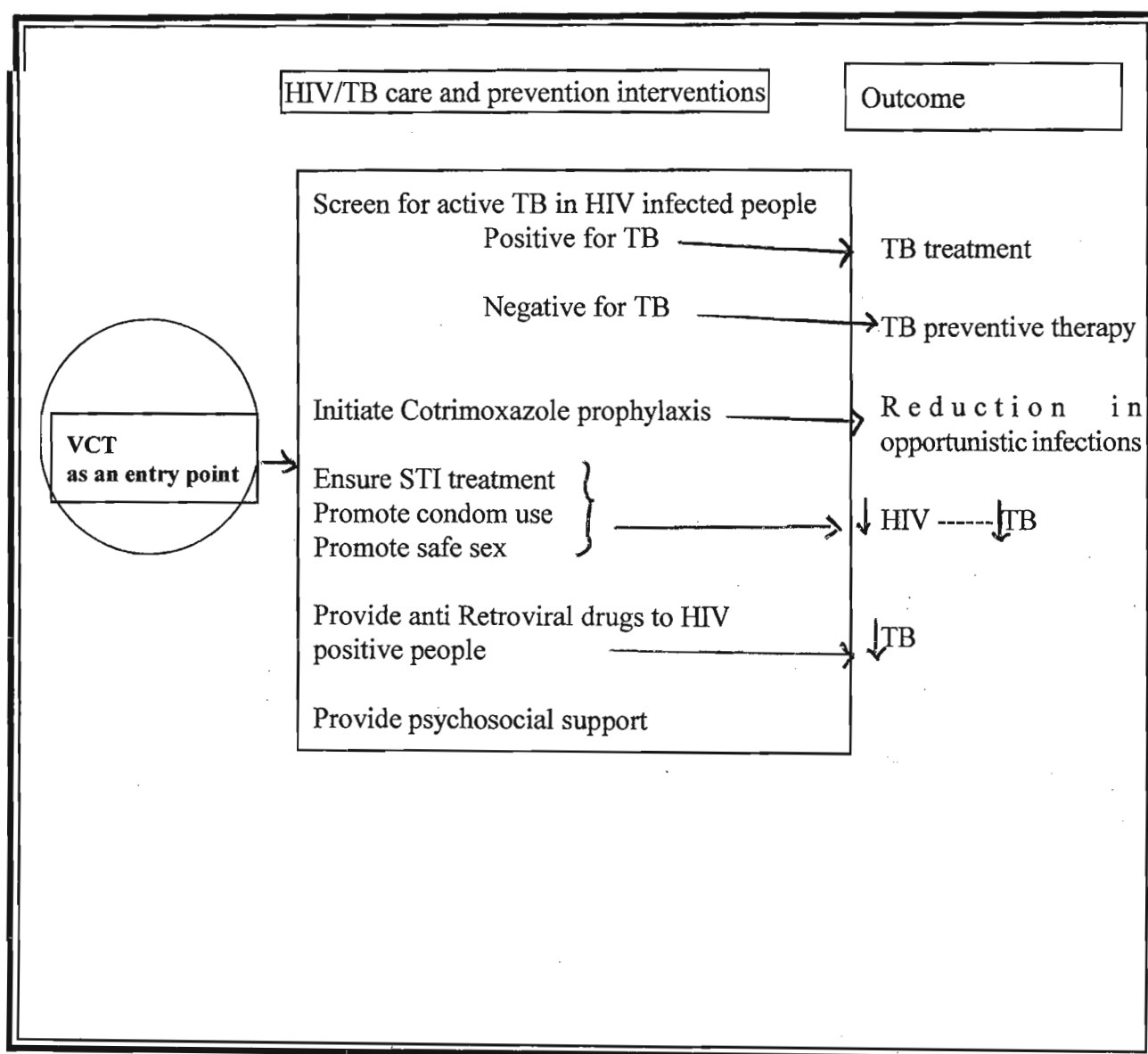


Figure 1. Interventions available to interrupt the sequence by which HIV fuels the TB epidemic.  
Source: Godfrey-Faussett P. Abstract ThPeB5205 XIII International AIDS Conference, Durban.

## 2.2 The ProTEST Initiative.

Based on the concept of interrupting the sequence of events by which HIV fuels the TB epidemic, an initiative to promote collaboration between HIV and TB programmes has been developed. This ProTEST Initiative promotes HIV testing through VCT as a key to a more coherent response to TB in high HIV prevalence settings. The name ProTEST reflects the **promotion** of HIV **testing**. The elements of the ProTEST Initiative are illustrated in Figure 2.<sup>17</sup>



**Figure 2. Principals of the ProTEST Initiative -operationalising the links between TB/HIV care and prevention activities using VCT as an entry point.**

Source: Source: Godfrey-Faussett P. Abstract ThPeB5205 XIII International AIDS Conference, Durban.

Since 1999 the ProTEST Initiative has supported research in several pilot sites and aims to establish a network of pilot sites that will evaluate means of integrating service delivery to reduce the burden of TB and HIV. The ProTEST Initiative relies on a persons' knowledge of their HIV status as an entry point into care. Knowledge of HIV status is obtained through VCT, and improved access to VCT services is a priority in the ProTEST pilot sites.

### 2.3. Background to VCT.

In 2000 it was estimated that at least 90% of the 24.5 million HIV-infected people in sub-Saharan Africa were unaware of their HIV status and that in South Africa there were 4.7 million people infected with HIV.<sup>18,19</sup> In keeping with the rest of sub-Saharan Africa, the majority of HIV-infected people in South Africa were unaware of their HIV status.<sup>20</sup> There may be many reasons why a person might be unaware of their HIV status including inaccessibility to VCT services. Inaccessibility has been identified as a problem and the need to improve access to VCT services is recognised. As stated by the editor of the Lancet, "the challenge is no longer the need to show the efficacy of VCT services but to make it accessible to those who desperately need it and to expand it and render it more acceptable, innocuous and less expensive".<sup>21</sup>

There are several models for VCT services, ranging from a health system based approach where health professionals counsel at health facilities, to one where non-health professionals, (lay counsellors), counsel at a free standing site (not attached to a health facility). Studies on VCT indicate that most VCT services are based in a health system, and that many people with HIV have the disease confirmed relatively late in their disease on the advice of a doctor.<sup>22</sup> Clients who are referred for VCT by a nurse or doctor, are referred to as medically referred. Self-referral describes a client presenting for VCT, using his own initiative (not on the advice of a clinician). In South Africa, the majority of the VCT services are based at health facilities and a nurse carries out the counselling and takes blood to be sent to a laboratory. Reasons why clients access VCT services, their medical conditions and demographic profiles of such clients are poorly understood.

The 1999 South African guidelines for VCT recommended a minimum time of twenty-five minutes for pre- test counselling and twenty minutes for post-test counselling.<sup>23</sup>



Since early 2001 lay counsellors have been utilized in health-based VCT services in South Africa. The lay counsellors are trained and employed by NGOs, (such as the AIDS Training Information and Counselling Centre- ATTIC).<sup>24</sup> These lay counsellors are usually only trained in pre and post- test counselling for HIV. They do not take blood for testing, (the Health Professionals Council of South Africa stipulates that a blood sample must be taken by a trained health professional).<sup>25</sup> The training programmes do not involve aspects of TB. Research into the impact of lay counsellors on a VCT service is lacking.

#### 2.4. Outline of the South African HIV/AIDS & STD Strategic Plan.

VCT has been outlined as a priority in the HIV/AIDS & STD Strategic Plan for South Africa, (2000-2005).<sup>26</sup> This plan has been developed by the National DOH and aims “to provide HIV counselling and testing to 12.5% of people aged between 15 to 49 years, targeting the youth and rural communities by 2005”. The Strategic Plan assumes that staff trained on VCT will spend 12.5% of their working time providing counselling and testing services and states that the VCT project will not employ new counsellors but will make use of existing personnel who will be selected and trained as counsellors. The Strategic Plan also states that two health care staff per health facility, will be trained in VCT and the counsellors will be trained according to minimum standards developed by the Department. Duration of the training will be fifteen consecutive days. There is no South African published research on the capacity of existing health staff to provide the planned expansion in VCT.

The Strategic Plan also states that rapid HIV tests will be made available at health facilities. International studies have indicated that inaccessibility to an HIV test result may be a disincentive for HIV testing and that accessibility is improved using rapid HIV tests.<sup>27</sup> WHO has advocated use of these tests in resource poor settings.<sup>28</sup> Literature on the use of rapid HIV tests in a South African setting is limited.

The Strategic Plan also aims to improve prevention and treatment of TB and other opportunistic infections in HIV-infected people. Interventions available to prevent TB and other opportunistic infections in HIV-infected individuals include the use of Isoniazid and Cotrimoxazole prophylaxis. Several studies have indicated that these drugs reduce the incidence of TB and other opportunistic infections in HIV infected people.<sup>29,30</sup> The Strategic Plan does not outline a means to increase collaboration between the TB and HIV/AIDS Control Programmes.

The ProTEST pilot sites offer Isoniazid and/or Cotrimoxazole to HIV infected people. There is no South African literature on the effectiveness of Isoniazid and/ or Cotrimoxazole prophylaxis in HIV infected people.

### 2.5 Summary of gaps in review of the literature.

Publications highlight the need for greater collaboration between HIV and TB Control Programmes. Studies on means to improve collaboration are mainly operational and not specific to a South African setting. The ProTEST Initiative aims to use VCT as an entry point into an expanded, integrated TB Control Programme and aims to increase collaboration between TB and HIV Control Programmes.

While the South African DOH plans to use existing health workers to expand VCT services, the capacity of existing health staff to offer such an expanded VCT service is unclear. Research on the impact of using lay counsellors in a VCT service is lacking.

Reasons why clients choose to use VCT services and the medical conditions and demographic profiles of such clients are poorly understood.

There have been no South African studies on the use of rapid HIV tests in health facilities or on the use of Isoniazid and Cotrimoxazole as prophylaxis in HIV positive clients.

This study aims to address some of these gaps in knowledge.

# CHAPTER 3

## METHODOLOGY

This chapter outlines the study design, ethical considerations, sustainability and limitations of the study. Description of the study population and methods used to determine the selection of study sites are provided. Criteria for selection of the types of rapid tests used and information on these tests is summarised. In accordance with the objectives of the study, methods used to assess the capacity of existing health care workers to offer an expanded VCT service and the need for rapid HIV tests are described. Emphasis is placed on description of the development and assessment of a training, mentorship and support programme for lay counsellors, as the use of such lay counsellors was unique to UGU South ProTEST pilot site. Methods used to determine the impact of lay counsellors on accessibility to VCT and to review patients using the service are outlined. A description is provided of the methods used to indicate whether the presence of lay counsellors affected the number of cases of TB diagnosed and number of people completing their TB treatment.

3.1 Study design. This was a descriptive prospective study.

Ethical considerations. Permission to use information from the UGU South ProTEST pilot site as a Masters study was provided by DR H Hausler (Technical Advisor for the HIV/AIDS/STD Directorate). Permission to use lay counsellors for VCT and to use rapid HIV tests was obtained from the Research Ethics Committee, University of Natal Durban in November 1999, (Study number E103/00).

Prior to being offered VCT, all clients were required to sign a consent form that outlined the role of a lay counsellor and explained the procedure for rapid HIV testing (Appendix 3). The consent form was available in Zulu and English and was administered by the lay counsellor, who explained that there was a professional nurse available to counsel the client depending on client preference. The lay counsellor stressed that the client was not obligated to receive counselling, could withdraw from counselling or testing at any stage and that withdrawal would not adversely affect care given. After pre-test counselling the client had an opportunity to consider whether or not he/she wanted the test and the options of waiting and considering the implications of the test were outlined. The client could refuse the testing or could refuse to hear his result. If the client preferred, he could return at a later time to hear his result. A person under the age of 14 years had to have a consent form signed by a parent or guardian.

### Sustainability of the ProTEST pilot site interventions.

The National, Provincial and Regional Departments of Health supported the ProTEST site and, if interventions were considered successful the Provincial DOH would provide funding for continuation, (salaries for the lay counsellors and funds for rapid HIV tests).

Limitations of the study. A limitation of the study was that it was carried out in a ProTEST pilot site and the resources available might not be available elsewhere. Resources included full time lay counsellors, pilot coordinator, driver, car and computers. Thus, results from this study may not be to be generalised.

Study population. Nurses and lay counsellors in UGU South working at the study sites were involved in the study. All people who used VCT services at the study sites between September 1999 and April 2001 were enrolled in the study.

### 3.2 Background to selection of study sites.

In early 1999 the pilot site task team used the following criteria for selection of study sites:

- A volunteer who was trained in basic aspects of HIV /AIDS should be active at the site
- Health staff should support the use of a lay counsellor.

The sites selected are listed below. Appendix 2 indicates the location of the study sites.

- Port Shepstone Regional Hospital
- Murchison District Hospital
- Port Shepstone Borough Clinic
- Margate Clinic
- Entabeni Clinic
- Marburg Clinic
- Southport Clinic
- Gamalacke Clinic
- Boboyi Clinic
- Bomela Clinic.

Two hospitals and eight clinics were selected. One hospital serves as a regional referral hospital (Port Shepstone) and the other as a district hospital (Murchison). Two clinics were urban, (Margate and Borough), two were peri-urban (Marburg and Gamalacke) and the remaining clinics were rural.

### 3.3 The rapid HIV tests.

In this study, the rapid HIV testing procedure was carried out by health staff and not by a lay counsellor (in accordance with the Health Professional Council ruling on testing). The types of rapid HIV test used were determined at the national DOH level by the National Chief Director for HIV/AIDS & STDs. Two types of rapid HIV tests, which relied on a finger prick to obtain blood, were recommended for use. These two tests had been accepted by the National Institute of Virology.

A screening test (the Abbott Determine) was used for all clients who accepted testing after pre- test counselling and a confirmatory (Smart Check Test) was used for clients who tested HIV positive. The procedure for use of these tests is outlined in Appendix 4. A test result is usually available within fifteen minutes.

For the UGU South ProTEST pilot site criteria for selection of these tests included:

- Acceptable Sensitivity/ Specificity
  - Screening test: Abbott Determine HIV test.
  - Sensitivity on whole blood (finger prick 100%)
  - Positive predictive value 100%
  - Negative predictive value 99.8%
  
  - Confirmatory test: Smart Check Test.
  - Sensitivity 99.6%
  - Specificity 99.9%
- Ease of use, easy to perform and read.
- Easy storage (can be stored at room temperature if out of direct sunlight)
- Long shelf life (up to 2 years)
- Acceptable cost (R 15 each - negotiated price for this project.)

The National Department of Health had outlined a flow chart for the rapid HIV testing procedure as illustrated in Figure 3.

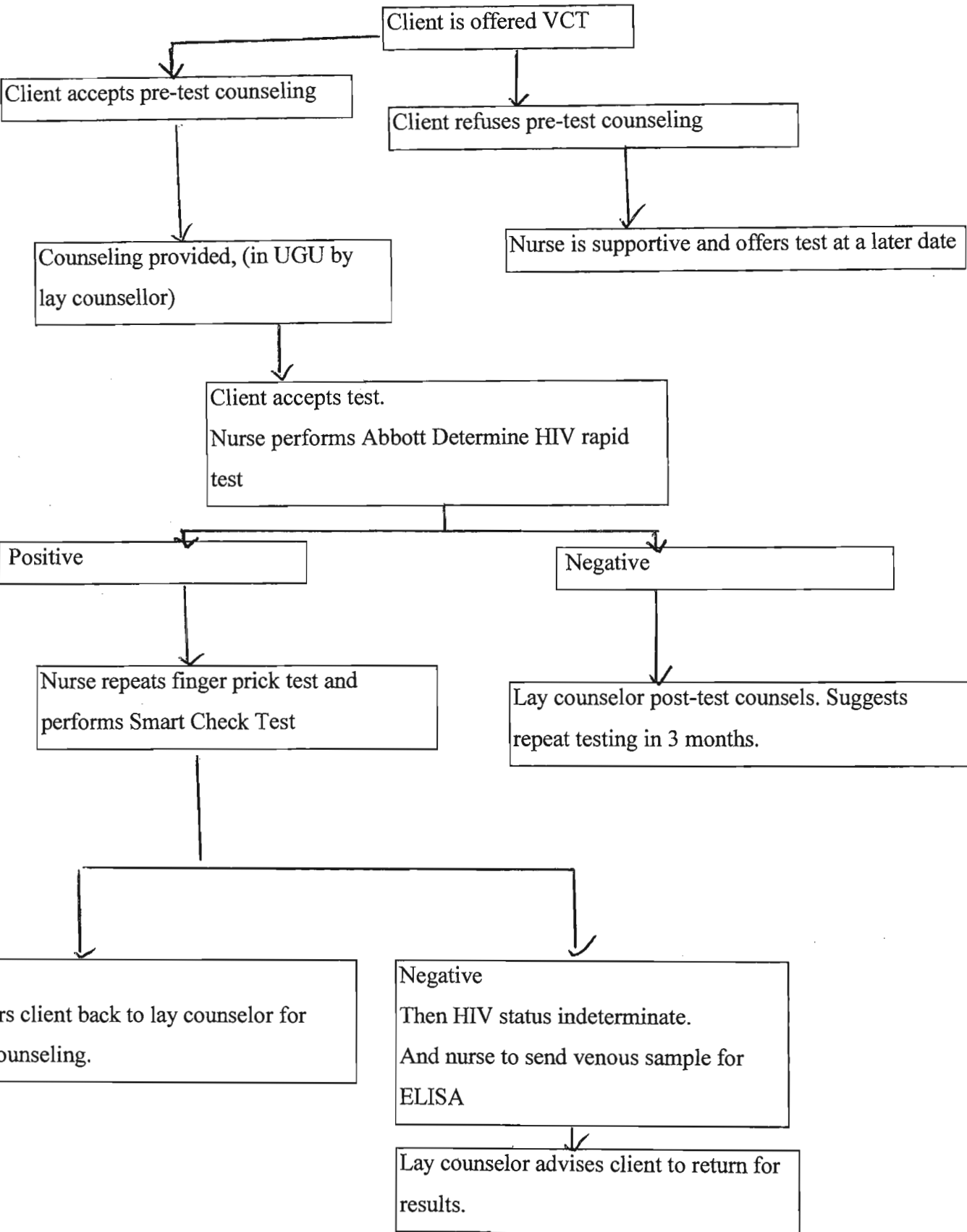


Figure 3. Flow chart for counselling and testing procedure using rapid HIV tests.

#### Training of nurses in use of the rapid HIV tests.

Training of nurses in the use of the rapid HIV tests was carried out at a one-day workshop in October 1999. Nurses from all sites attended and the researcher and representatives from the rapid HIV test manufacturers carried out the training. The researcher visited all study sites in January 2000 and was satisfied that the testing procedure was being adhered to, the tests were readily available and nurses were willing and able to undertake testing.

#### Quality assurance for rapid HIV tests.

Initially each nurse carried out 20 rapid and 20 ELISA tests on the same client to ensure that her technique was adequate and to give her confidence on the use of the rapid test. Throughout the study period, one rapid test per batch of 500 was sent to Port Shepstone regional laboratory by the researcher and this was compared to a result from the traditional ELISA testing methods. This method aimed to ensure quality control of tests.

#### Systems for ordering and delivery of rapid HIV tests to study sites.

The tests were ordered in bulk by the researcher, and when a nurse noted that test stock was becoming depleted, she contacted the researcher. A driver, who was employed by South Coast Hospice, delivered the requested tests to the health facility.

#### Stock control.

A counselling questionnaire was completed for every client who was counselled (Appendix 5). The numbers of tests carried out was determined by analysis of the number of questionnaires returned. The researcher compared the numbers of questionnaires returned against the number of tests distributed.



Indicators to measure the objectives of this study are summarised below. The limitations and validity of each indicator are discussed.

#### 3.4 Assessment of the capacity of existing health care workers to expand a VCT service.

In order to assess the capacity of existing health care workers to expand a VCT service, both qualitative and quantitative methods were employed and three reviews undertaken. The reviews were:

- \* Assessment by pilot task team
- \* Postal survey
- \* Exploratory review of clinic and staff records

##### Assessment by pilot task team..

In early 1999, the pilot task team held a four- hour discussion meeting to review categories of staff available, and their capacity to offer an expanded VCT service in order to meet the requirements of the ProTEST Initiative. The discussion was informal and all present had knowledge of working conditions of staff in UGU. The discussion was recorded in writing and main points were summarised by the researcher.

##### Postal Survey.

A qualitative review of nurses' opinions on their capacity to expand a VCT service was undertaken in a postal survey as a triangulation method to compare to the opinions of the task team. The objectives of the review were broad and not framed around specific variables. The review concentrated on nurses' perceptions, as this category of health care worker would be expected to carry out the expanded VCT service. In addition, this category of health care worker would have an overall understanding of the health facility and of the existing staffs' capacity to expand VCT.

As the nurses were based in health facilities that were spread over a wide area, with difficult access, a postal questionnaire method was used. An anonymous, open- ended self administered questionnaire was drawn up by the task team and posted to the sister-in-charge of each health facility in UGU South (total of twenty one clinics and four hospitals). This anonymous opened ended method was used to enable the nurse to express herself freely. A pre-addressed envelop with stamp was enclosed to enable the nurse to return the questionnaire to the researcher.

This questionnaire was kept simple and there were only two questions:

Do you think lay counsellors would be useful at your health facility?. Please give reasons for your response.

Do you think rapid HIV tests would be useful at your health facility?. Please give reasons for you response. (Appendix 6).

The questionnaire was posted to nurses-in-charge in September 1999 and the researcher carried out an analysis of returned questionnaires in November 1999. A data capture sheet was created in which themes noted on the questionnaires were listed vertically and numbers of respondents giving a similar response were listed horizontally. Common themes were thus identified and quantified.

A limitation of this method was that it relied on an efficient postal service. A further limitation may be informant bias, in that nurses might have given responses that they believed the researcher wished to hear. The researcher considered that if the majority of nurses gave the same response, then the response might be considered valid “at face value”. Due to the small sample size the results may not be able to be generalised. If there were a poor return of questionnaires, the findings would not be able to be generalised to represent all nurses in the district.

#### Exploratory review of clinic and staff records.

In November 1999, the researcher undertook an exploratory quantitative review of the nurse time available per client at clinics. The aim of the review was to gain an indication of the capacity of a nurse to offer an expanded VCT service. In general, if a nurse had a very short time available per client, then she may not be able to free up 12.5% of her time for VCT. Clinics, rather than hospitals, were selected for study, as only a nurse was available to see clients at clinics, (in a hospital both doctors and nurses would see clients).

Four clinic sites were selected at random, (the clinic names were selected blindly from a box containing all eight clinic names). Considerations used to determine the number of clinics studied included availability of researchers` time, and availability of data. The researcher was aware that clinic data was not readily available as the data was sent monthly to the Regional DOH.

For this review the researcher analysed clinic records from four of the eight clinic study sites (50%) for November and December 1999. The sample size was determined following discussion with the Medical Research Council, Durban. The numbers of clients attending the health facility per month and the numbers of nurses available to treat clients was recorded and an average time available per nurse per client was calculated.

A limitation of this exploratory review was that it was undertaken at only four health facilities and data was analysed for a relatively short period of time (two months).

### 3.5 Review of the need for rapid HIV tests.

Two methods were used to assess the need for rapid HIV tests:

- Retrospective analysis of counselling questionnaires
- Telephone interviews.

#### Retrospective analysis of counselling questionnaires.

A quantitative review was undertaken to assess the need for rapid HIV tests. This involved retrospective analysis of a counselling questionnaire (completed for every client who accepted counselling during the study period). This questionnaire was developed by the HIV/AIDS/TB Technical Advisor and was standardised for all ProTEST pilot sites in South Africa, (Appendix5). The questionnaire noted the HIV test type and the date on which the client received their results. The proportion of clients who were tested and returned for their result could thus be determined. If a significant proportion of clients never returned for their results, then the rapid HIV tests may be useful. In September 1999 a one-day workshop was held to train nurses and lay counsellors on the use of this questionnaire. The workshop was facilitated by the researcher and the National HIV/AIDS/TB Technical Advisor. The questionnaires were collected by a driver on a monthly basis and data was entered on to an EPI-6 programme by the researcher. Errors noted on the questionnaires were clarified by telephonic discussion with the counsellor. The data content is therefore considered to be valid and accurate.

A limitation of this review is that it was only carried out in health facilities involved in the ProTEST pilot and the results may not be able to be generalised to represent other health facilities in the district.

#### Telephone interviews.

A qualitative method to determine the need for rapid tests involved telephonic interviews. In November 1999 the researcher telephoned each clinic in UGU and asked the nurse-in-charge what the turn-around time for an HIV test result was at that health facility, (time taken from when blood drawn to when result available). The researcher also established the major factors influencing turn-around time. This method was used as the researcher could determine the general functioning of the HIV testing service and results obtained would be descriptions of real situations rather than statistical measures.

### 3.6 To develop a training, support and mentorship programme for lay counsellors and to determine the effectiveness of this programme:

Methods used to develop the training, support and mentorship programme and to determine the effectiveness of the programme included:

- Review by the pilot task team
- Successful completion of written examination
- Perceptions of nurses
- Perceptions of lay counselors.

#### Review by the pilot task team.

Throughout 1999 a series of meetings were held in which the pilot task team determined the curriculum and the training, mentorship and support programme for the lay counsellors. The indicator used to measure this objective was development of a plan for training, support and mentorship. The team had input from the Regional TB Coordinator, trainer from the South African National Association for TB- SANTA, traditional healers and a social worker. The social worker had extensive experience of counselling and in training on counselling methods. Three manuals were reviewed and modified to suit the needs of the pilot site.

1. Counselling and Training Manual (Pietermaritzburg AIDS Training and Information Centre)
2. Minimum standards for counselling and training. Department of Health
3. Tackling TB together. Training programme guidelines for TB Treatment Supporters  
(DR S Knight Department of Community Health, University of Natal)

A limitation of this method was that it was very specific to the requirements of the ProTEST pilot site.

#### Successful completion of a written examination.

The successful completion of a written examination was used as an indicator to assess success of the lay counsellor training programme. The written examination, which was based on the training curriculum, was set by an external organization (Sun Gardens Hospice, Pretoria). A representative from this hospice marked the papers and if the lay counsellors passed the exam, then it was considered that short-term training had been successful.

### Perceptions of nurses.

An indirect indication of the effectiveness of the training, mentorship and support programme was made using the perceptions of nurses. If nurses considered that the lay counsellors were performing their duties adequately, then it may be assumed that the training, mentorship and support programmes were successful. In June 2000 the researcher carried out a review of the perceptions of nurses on lay counsellors. In this review an interview technique was used and nurses were interviewed at five sites (with written permission from the interviewee). This technique was selected as it gave the respondent the opportunity for personal explanation and detailed responses. The selection of the sites was random with names being picked by the researcher blindly from a box containing all the site names. The sample size was selected after discussion with the Medical Research Council, Durban.

The researcher asked the nurses to give their opinion on lay counsellors at their health facility. The interview was non-directive and the researcher asked only for clarification or expansion of themes. The interviews were taped and the main themes arising from the interviews were transcribed and analysed by the researcher. A content analysis was undertaken.

A limitation of this method may be that the researcher conducted the interview and the nurse may have given responses that they thought the researcher wanted to hear.

### Perceptions of lay counsellors.

In another determination of the effectiveness of the training, mentorship and support programmes the perceptions of lay counsellors were determined. In May 2001 the researcher facilitated a focus group that included all lay counsellors participating in the study. This technique was selected as the researcher recognised that the lay counsellors may feel less threatened in a group rather than in an individual interview. The focus group may stimulate facts and opinions that the lay counsellors may not otherwise have chosen to reveal. The researcher used a non-directive approach and simply asked for clarification or expansion of themes. The lay counsellors were asked their opinion on the training, mentorship and support they had received. The responses were noted in writing by the researcher.

A limitation of the study may be that the researcher facilitated the discussion, and that lay counsellors might have given responses that they believed the researcher wanted to hear.

### 3.7 Ascertain whether the use of lay counsellors increases access to VCT.

To ascertain whether the use of lay counsellors increases access to VCT, a retrospective analysis of counselling questionnaires was undertaken, and the number of clients utilizing the VCT service during the study period determined. An increase in the number of clients utilizing VCT over the study period, may indicate an increase in access to VCT.

The numbers of clients utilizing VCT in this site was compared to the number of clients utilizing VCT at the other ProTEST sites, (where no lay counsellors were available). The HIV/AIDS/TB Technical Advisor made data available from the other ProTEST pilot sites. If a significant increase in client use of VCT occurred at this site then it may be due to the unique presence of lay counsellors.

The designation of the counsellor was also noted on the counselling questionnaire (e.g. nurse, doctor, lay counsellor). If an increasing number of clients were counselled by lay counsellors then it might be an indirect indication that accessibility had improved due to the presence of the lay counsellors.

A limitation of this study is that there were factors, other than lay counsellors, which may have lead to any increase in number of clients utilizing the VCT service. For example, if there were an increase in number of clients with symptomatic disease, then the number of clients referred for VCT would increase, independently of the presence of lay counsellors. In addition, more people may use the VCT service if they wished to access the prophylactic regimens available at the ProTEST sites. This limitation may be minimised by comparing uptake of VCT in this pilot to uptake in the other ProTEST pilot sites.

### 3.8 Determine reasons for referral to VCT, demographic profiles and medical conditions of clients who use VCT.

The reasons for referral, demographic profiles and medical conditions of clients using the VCT service were reviewed using a retrospective analysis of the counselling questionnaire. The questionnaire was completed by the counsellor and contained the following variables:

- demographic details, (age/sex)
- number of people refusing testing and reasons given for refusing
- reasons for medical referral
- reasons for self referral
- result of test.

The questionnaires were collected monthly and variables were entered on a spreadsheet using EPI 6 by the researcher and the data was analysed by the researcher. Lay counsellors had received extensive training on completion of the counselling questionnaire. The researcher returned forms to the lay counsellors for clarification if there were any perceived errors. The data was thus considered to be valid and accurate.



### 3.9 Monitor number of cases of TB reported and TB completion rates following introduction of lay counsellors.

Data from the National TB Control Programme registers was analysed to monitor the number of cases of TB diagnosed and completion rates of TB treatment over the study period. This data was collected routinely by nurses at the study sites and was entered on to an electronic register on an ongoing basis by the District TB Officer. The TB Officer made routine information available and the researcher extracted TB indicators (case finding and cure/completion rates) for the study sites.

A major limitation of this indicator was that it did not directly measure any specific impact of the lay counsellors on TB case finding and on treatment completion. The case numbers may have increased if the incidence of TB increased (independent of the effect of lay counsellors). The case finding and treatment rates may also be affected by factors other than lay counsellors (for example if more DOTS supporters were trained or if there was increased public awareness of TB, treatment rates would improve). In summary, any effect on the TB control programme could not be directly attributable to the presence of lay counsellors.

## **CHAPTER 4**

### **RESULTS**

This chapter presents the results of the study, which are outlined in terms of the objectives of the study:

- \*Capacity of existing health staff to expand a VCT service
- \*Need for rapid HIV tests.
- \*Development and evaluation of a training, support and mentorship programme for lay counsellors
- \*Effect of lay counsellors on access to VCT
- \*Reasons for accessing VCT, demographic profiles and medical conditions of clients
- \*Effect of lay counsellors on numbers of cases of TB diagnosed and numbers of cases completing treatment.

#### 4.1 Capacity of existing health care workers to expand a VCT service.

The results from three reviews are presented:

- Review by the pilot task team
- Analysis of a postal questionnaire
- Review of clinic and staff records.

##### Review by pilot task team.

In early 1999 the pilot task team undertook a review of VCT services in UGU South that indicated that there was only a health facility based VCT service. The VCT service utilized nurses for counselling and relied on laboratory based testing of blood. All blood samples were sent to a local hospital. The task team established that most nurses had a very heavy clinical workload and concluded that nurses would not have sufficient time to offer a comprehensive VCT service. The team found that it was difficult to free two health workers per facility to attend a fifteen-day VCT training course, (as recommended in the National VCT strategy). A review by the task team of the potential staff available to offer a VCT service is summarised as follows:

- Nurses trained as HIV counsellors.

The HIV/AIDS regional co-ordinator found that only 17% of nurses in the district had been trained and accredited as HIV counsellors. The team clearly indicated that nurses were busy reviewing clients with medical problems and in carrying out administrative duties. Nurses did not have the capacity to cope with an increased workload that implementing an expanded VCT service would require.

- **Doctors:** The task team found that both state and private doctors referred clients to a nurse for HIV pre and post-test counselling and that doctors were not in a position to offer a VCT service. The doctors could not be used as HIV counsellors as there may be language or communication problems and doctors had limited time available to counsel. In addition, few doctors had accredited training on counselling.
- **Social Workers:** There was only one social worker based at a health facility in UGU South, and there were no plans to increase the numbers of social workers.
- **Community Health Care Workers (CHWs):** In 1998 there were ninety CHWs in UGU South. They were employed by an NGO, (the Progressive Primary Health Care Network). They had been employed to carry out health education and basic client home-based care. They had no training on HIV counselling and were not affiliated to a health facility. Their level of education was unknown. This category of worker had specific duties and was not suitable to offer VCT.
- **HIV/AIDS Educators (HACS):** There were forty HACS in UGU South who were employed by the Health Department. They were tasked with visiting homes to provide specific education on HIV/AIDS. They had no training in HIV counselling and were not affiliated to a health facility. Again the level of education was unknown and they could not offer a VCT service.
- \* **Volunteers for Directly Observed TB Therapy (DOTS):** In 1998 there were few trained DOTS volunteers to support clients taking TB medication. They were mainly linked to health facilities and had very limited knowledge of HIV/AIDS. The task team concluded that they were not trained as HIV counsellors and could not offer a VCT service.
- **Home Based Care Workers (HBC):** South Coast Hospice had been operating an “Integrated Community -Based Home Care” programme since 1997. These HBC workers cared for AIDS sufferers in their home and were linked to hospitals and clinics. They would not have time to pre and post- test counsel for HIV and had no training as HIV counsellors.
- \* **ATTIC Counsellors:** There were two HIV lay counsellors employed by ATTIC and based at health facilities. This number was not sufficient to deal with expected increase in workload due to expanded VCT service in a ProTEST pilot site. There were no plans to increase the numbers of ATTIC counsellors.

### Analysis of postal questionnaire.

Eighteen nurses returned completed postal questionnaires (18; 72%). The researcher did not determine the number of nurses who had ever received the questionnaire nor the numbers of those who had completed and re-posted it, (some questionnaires may have been mislaid by the postal service). There was no follow up of the non-responders and their perceptions may have varied from those who responded.

There was an equal distribution of respondents from rural and urban sites. Given the good response rate, the results can be statistically generalised to represent other health facilities. The main themes arising from the questionnaires are presented as four main themes:

- \*Support for the concept of counselling
- \*Problems identified affecting ability to counsel
- \*Perceptions on rapid HIV tests
- \*Support for full time counsellors.

#### • **Support for the concept of HIV counselling.**

Sixteen respondents (88%) commented on the need for HIV counselling and all perceived it to be necessary. Comments made included:

- “ HIV counselling is very necessary but is a neglected activity”.
- “ I feel happy about HIV counselling and it is very necessary”.
- “ There are many clients who are HIV positive and need counselling..”

Only one respondent mentioned a specific reason on why HIV counselling was considered necessary:

- “ HIV counselling may motivate the kind of behaviour that will limit spread in this area”.

- **Problems identified affecting ability to counsel.**

The overwhelming theme, mentioned by sixteen respondents (88%), was that the nurses perceived that they did not have capacity to carry out HIV counselling and testing. The main problem identified was insufficient time due to a heavy workload. Twelve respondents (66%) specified that they were too busy to carry out adequate counselling. Quotations are given to illustrate the nurses' views on their ability to offer counselling:

“To do adequate counselling means significantly affecting the amount time available for other patients”.

“Each counselling session takes about 45 minutes, this leaves other clients waiting in the queue for a long time”.

“I do not have time on busy days when there are seriously ill patients”.

“Sometimes there is only one health care worker to conduct all sessions and health care delivery”.

“I can only spend a few moments with clients with poor follow up due to shortage of staff”.

At one clinic, clients had to make appointments to be counselled. One nurse stated that she hoped the problems regarding workload would be recognised and more staff employed to meet the demanding work. She stated that:

“Team spirit of the nursing staff make the impossible possible and no one is sent home without counselling if it is needed:

Three nurses also felt that they had insufficient time to carry out activities that related to VCT.

“I don't have time to give adequate health advice.

“I don't have time to counsel and educate people for individual problems and grievances.

“I don't have time to sort out feelings”.

Four nurses, (22%), felt that HIV counselling was emotionally draining.

“I find counselling draining as I have to counsel family, girlfriend, boyfriend or even boss!”

“I am stressed when I give post test counselling, the client breaks down, cries out with anger, desperation or fear”.

“I sometimes have feelings of despair, heart pain and feel helpless, as I feel I can't help those who are still negative to maintain their status and I feel that I am doing little to support those who are HIV positive”.

Only one nurse felt that counselling was a positive experience and wrote:

“ I am amazed at the positive attitude and strength displayed by many patients and use this attitude as a source of renewal for my own emotions”.

A major problem identified was that in three clinics (18%) there was no nurse trained in HIV counselling at the health facility and the nurses stated that:

“ Our clients have to go to St Andrews hospital for counselling”

“ I rely on a counsellor from ATTIC if he is available”

“ HIV counselling is only done here when the HIV counsellors visits”.

Two nurses felt that they had insufficient space in their clinics to counsel.

“ We have no room for counselling and clients have to go to Harding to be counselled”.

“ If a sick client is in the room then we can not counsel”.

- **Perceptions of nurses on rapid HIV tests.**

Fifteen nurses commented on the rapid HIV Test (83%). Twelve of these respondents (80%) commented that the rapid HIV tests would be useful. Quotations to illustrate these perceptions are as follows:

“Rapid HIV testing is an excellent idea as there will be no waiting for results and specimens would not have to be sent to the laboratory”

“Rapid tests would be a big help as the client can see his own result”

“HIV testing would save time and client anxiety”

Three nurses (16%) did not feel that rapid HIV test would be useful as they were concerned about validity and pressure on the client to receive his result. The nurses stated that:

“ I am not happy about having rapid HIV tests at my clinic as I am not satisfied that the results will be accurate”.

“A too rapid an HIV test result may be traumatic for the client and post-test counselling will be more difficult”.

“ I feel that people may be forced to take the results”.

- **Support for full time HIV counsellors.**

Seventeen nurses (94%) felt that full time HIV lay counsellors would be useful at their health facility.

Quotations include:

“a full time HIV counsellor.. not one, more than one!”

“ the numbers of HIV patients are increasing. We definitely we need a full time counsellor”

Only one respondent from a deep rural clinic felt that lay counsellors would not be necessary, at the current time:

“ a full time HIV counsellor would not be necessary as numbers are not high at the moment”.

Reasons given as to why a lay counsellor was considered necessary involved perceptions that the lay counsellors would have more time available to counsel, support and offer health education.

“ Having full time counsellors would alleviate the pressure from nurses”.

“ We need a full time counsellor as we have many problems with staff shortage”.

“ A full time counsellor would have more time available to counsel and educate clients who are waiting and to sort out clients feelings.”.

“ A counsellor would have more time available for health education”.



### Analysis of clinic and staff records.

The following clinic names were selected at random from the eight study clinics:

- Gamalacke
- Boboyi
- Bomela
- Borrough.

There is one urban, one semi-rural and two rural clinics. The time available for client review was estimated for a forty- hour week as these clinics offer a day service only. The average nurse- time available per client is represented in Table 1.

**Table 1: Average nurse- time available per client at four clinics in November and December 1999.**

| CLINIC SITE   | Borough | Gamalacke | Boboyi | Bomela |
|---|---------|-----------|--------|--------|
| Average time available per client (minutes) in Nov 1999 | 10      | 11        | 12     | 5.5    |
| Average time available per client in Dec 1999.          | 11      | 10        | 13     | 6.5    |

The average time available was 9.8 minutes per clients with a range of 5.5 to 13 minutes per client. At these clinics a nurse would not have sufficient time to offer a client twenty-five minutes for pre and twenty minutes for post- test counselling (as outlined in the South African Guidelines for VCT).

#### 4.2. Review of the need for rapid HIV tests.

Results from two reviews to determine the need for rapid HIV tests are presented:

\*Retrospective analysis of counselling questionnaire.

\*Telephone interviews.

##### Retrospective analysis of counselling questionnaire.

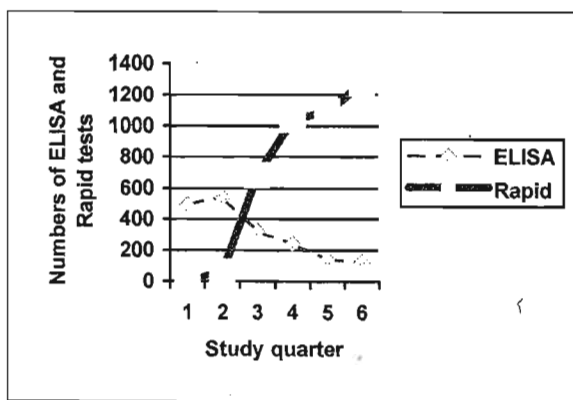
A retrospective analysis of counselling questionnaires indicated that during the study period, 7 495 individuals were tested for HIV. A total of 1 730 (23%) people were tested using hospital based tests (ELISA) and of these people 644, (37.2%) never returned to the clinic for their test result. The remaining 5 765 tests were carried out using rapid HIV tests and of these, only 93 (1.6%) never got their HIV test result. This information is summarised in Table ii.

**Table ii: Test type, number of people tested and number of results (%) never given to client.**

| Type of test | Number tested | Result never given to clients (%) |
|--------------|---------------|-----------------------------------|
| Rapid        | 5 765         | 93 (1.6%)                         |
| ELISA        | 1 730         | 644 (37.2%)                       |

A person was much more likely to get an HIV test result if a rapid test was used ( $p=0.001$ ). The use of the rapid HIV tests would increase the numbers of people gaining access to their HIV test result.

The numbers of ELISA and rapid HIV tests used over the study period is illustrated Figure 4 (the study period is divided into six year-quarters).



**Figure 4. Numbers of ELISA and rapid HIV tests carried out per year quarter (September 1999 – April 2001)**

### Analysis of telephone interviews.

The researcher contacted twenty nurses-in-charge of hospitals and clinics by telephone between September and October 1999 (20; 80%). The nurse- in- charge at the remaining facilities was not available on the day of the interview. There were more responses from urban clinics (5; 83.3%) however; three quarters of nurses from rural (6; 75%) and deep rural clinics (6; 75%) responded. Nurses at all three hospitals responded. The response rate was adequate for the results to be generalised to represent other health facilities.

Interviews with the nurses concluded that if blood had to be sent to a hospital, the sample was taken and stored until transport was available. Transport came from a local hospital and the average turn-around time, (time taken from drawing blood to having a test result), was nine days. The range was from 24 hours to 21 days. This information is summarised in Table iii

**Table iii: The number of respondents from each facility (hospital and urban, rural, deep rural clinics) and the turn around time for an HIV test result.**

| Site                             | Hospital | Urban clinic | Rural clinic | Deep rural clinic |
|----------------------------------|----------|--------------|--------------|-------------------|
| Total number of site type in UGU | 3        | 6            | 8            | 8                 |
| Number of respondents (%)        | 3 (100)  | 5 (83.3)     | 6 (75)       | 6 (75)            |
| Turn around time (hours or days) | 24 hours | 24 hours     | 10 days      | 21 days           |

The only factor identified by the nurses affecting turn-around time was transport. In the deep rural areas transport was only available once a week and results were returned two or three weeks later. The nurses stated transport was unreliable and due to poor roads, the vehicles often needed repair. There were no fax machines available in these deep rural clinics to enable a result to be made available.

This review indicated that turn around time for hospital- based HIV testing tests was up to three weeks. A rapid HIV test would be useful to reduce waiting time for a test result to 15 minutes.

#### 4.3. Develop and determine the effectiveness of a training, support and mentorship programme for lay counsellors.

Results on development of an effective training, support and mentorship programme for lay counsellors are presented as the following:

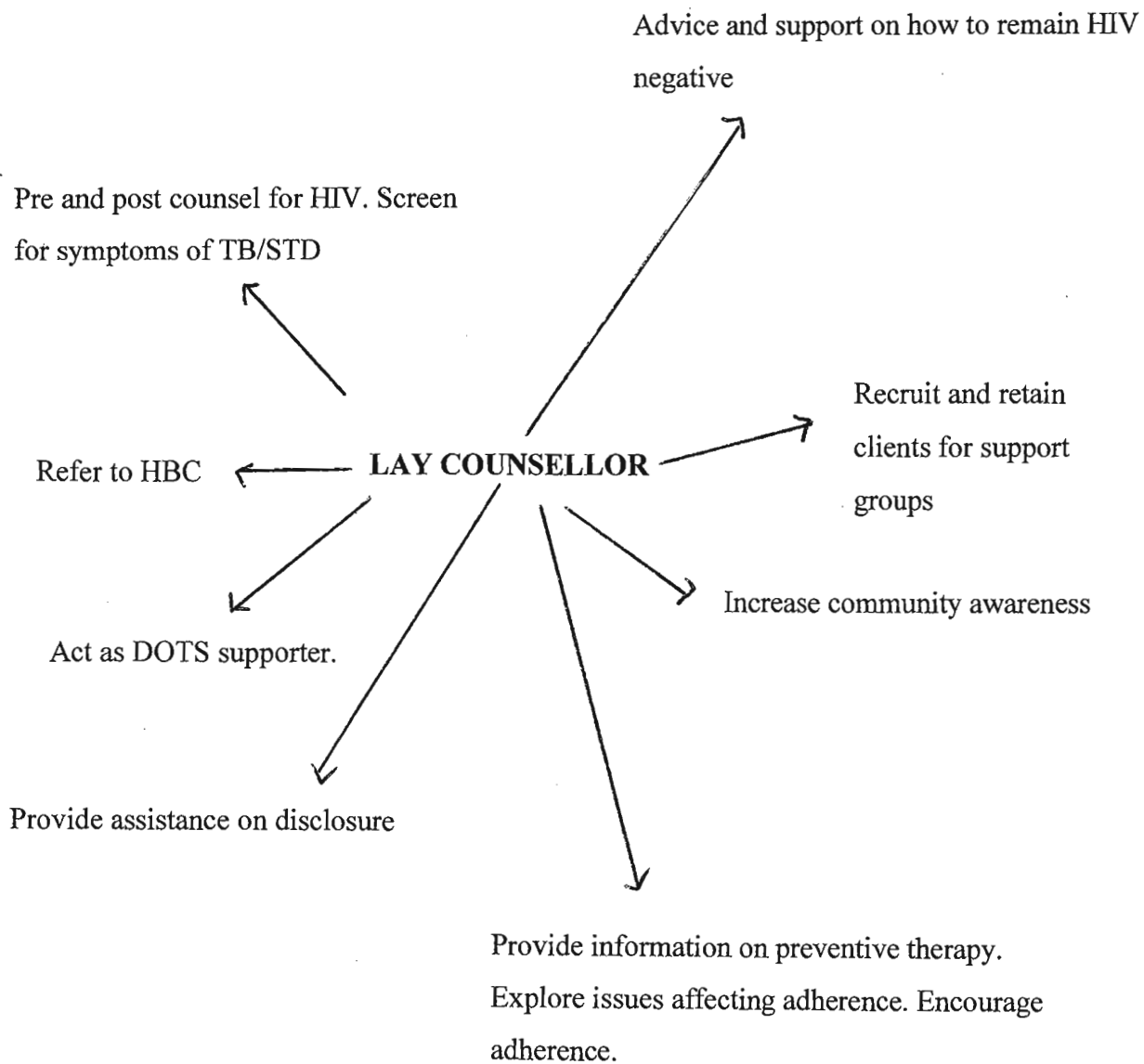
- \* Review by pilot task team
- \* Written examination
- \* Perceptions of nurses
- \* Perceptions of lay counsellors.

##### Review by pilot task team.

Recognizing the aim of the ProTEST site, to improve collaboration between HIV/AIDS and TB programmes, the task team determined that lay counsellors must have training to fulfil a role that was broader than the traditional role of lay counsellors, (the traditional role of lay counsellors being pre and post test counselling for HIV testing). The ATTIC and Department of Health VCT training courses were expanded to include training on the following:

- delivery of daily health education talks at clinics on availability of a VCT service and the advantages of knowledge of HIV test result;
- screening clients during VCT for symptoms of TB;
- targeting clients with TB for VCT;
- acting as DOTS supporters for clients taking TB treatment;
- recruiting and retaining clients in support groups;
- providing HIV positive clients with information on preventive therapy;
- exploring problems with adherence to preventive regimens and encouraging compliance;
- making referrals to home based-care programmes.

The expanded role of the UGU South lay counsellors is summarised in Figure 5.



**Figure 5. Representation of the expanded role of lay counsellors in UGU South Pilot Site.**

### Summary of the training programme.

The task team developed a training programme, which was conducted over a two- month period, May to June 1999. A skills development based approach was used which utilized the three main teaching methods:

- experiential learning;
- problem-based learning;
- didactic methods.

In summary the content consisted of:

- Communication and listening skills;
- Introduction to counselling;
- Self-awareness exercises;
- Verbal and non-verbal counselling skills;
- Epidemiology of HIV/AIDS and TB;
- Legal and Ethical issues;
- Issues around behaviour change
- Theory of pre-test and post counselling;
- Signs and symptoms of TB, STDs and HIV/AIDS;
- DOTS and factors affecting adherence to drug regimens;
- Rapid HIV tests;
- Preventive therapy;
- Crisis counselling;
- Socio-economic impact of HIV/AIDS;
- Grants and welfare;
- Sexuality and sex counselling;
- Death, dying and bereavement;
- Presentation skills;
- Self assertiveness;
- Stress management;
- Child abuse/ rape management
- Alcohol and drug abuse;
- Community resources and referrals;
- Principles of research/ Documentation;
- Methods for recruiting and retaining members in support groups.

Trainers included:

Doctor (ProTEST site co-ordinator);

Nurses;

ATTIC counsellors;

Teachers;

SANTA representative;

Psychologist;

Social workers;

Traditional healers;

People with AIDS;

Patients with TB;

Laboratory staff.

The main trainer was the social worker who had extensive training in counselling.

#### Mentorship and support programme.

The task team held meetings with the nurses-in-charge, of health facilities involved in the study, during May and June in 1999. The purpose of these meetings was to determine a mentorship and support programme. All agreed that a full time counselling job may be stressful. The task team and nurses determined that the nurses should act as an initial source of contact for support and mentorship for the lay counsellors. The nurses would see the counsellors on a daily basis and be available to assist with any immediate problems. If the nurse could not solve the problem, or if the counsellor preferred, then the hospice social worker and doctor would be available to assist with support.

The task team concluded that the lay counsellors might wish to spend time with each other to discuss problems amongst themselves. To this end, the counsellors were released from counselling duties on the last Friday of every month. The counsellors were provided with a venue at Hospice and with refreshments for this monthly meeting. Nurses also agreed that the counsellors should be able to take a short break after a stressful session. The counsellors could spend time unwinding in the nurses' duty room.

#### External written examination.

All candidates passed the external written examination in August 1999. The pass mark was 50% and the average mark was 56 (with a range of 42 to 87). The external examiner was satisfied with the standard of the written examination. The content of the training programme was considered to have been understood and assimilated by the lay counsellors.

### Perception of nurses.

The researcher held in-depth interviews with four clinic nurses (40% of study sites) to assess if they considered that the lay counsellors were offering a high quality service. The random sample included nurses from the two hospitals and from Borough (urban) and Gamalacke (semi-rural) clinics. The main themes arising from the interviews are presented with quotations to highlight specific opinions. All nurses interviewed had a favourable opinion of the lay counsellors and were grateful to have them based at their facility. Themes are divided into:

- \*Positive aspects of the counsellors
- \*General role of the counsellor
- \*Concern about the counsellors.

### **Comments made on the positive aspects of the counsellors were:**

All the nurses interviewed were very positive and supportive of the lay counsellors. Comments made were:

- “ The counsellor plays a very important role.”
- “ I would like to say thank you very much to the people who gave us HIV counsellors at our clinic”.
- “ We rely heavily on our HIV counsellors they really do a great job. I really think they are performing an essential service”.
- “ Thank you for the lay counsellors, we could not survive without them”
- “ Really the HIV counselling in our institution has made a great change”.

### **Comments made of the general role of the counsellor.**

All the nurses perceived that the number of clients being tested had increased, and that the quality of counselling offered had improved following introduction of the lay counsellors.

A few insightful comments regarding the lay counsellors are listed below:

- “ Counsellors can show people how to be careful and make use of devices provided, e.g. condoms”.
- “ The care given by the counsellors to our clients has made a big difference to our clients. I find a vast difference, there are now people who care”.
- “ The presence of these counsellors has really changed the attitudes of clients. Before one was trying to say something about HIV/AIDS- you could see you were facing a big wall, but now with the counselling the attitudes have changed”.
- “ The clients are so much more willing to come and be tested now. It seems that some of the secrecy of HIV has gone”.



“We are seeing patients coming voluntarily to be counselled and we have seen the use of condoms go up and up. Before we were just touching condoms, or talking about condoms but now you should see the way they are using condoms and are asking for condoms. Really the HIV counselling has brought about a great change in condom use”.

“I can say without doubt that our STD and TB patients are getting better care because now they are educated and empowered. There are no STD or TB patients who leave our clinic without being counselled”.

“They, (the counsellors), are putting HIV positive people in contact with others in the community and help them to get involved with people who will help them. The counsellors have started support groups at our clinic. Though it is not a big group- yet they have managed to form it”.

#### **Concern about the lay counsellors.**

Three nurses expressed concern about the lay counsellors own coping skills. The main concerns were that the counsellors had a very stressful job and perhaps needed counselling or de-briefing themselves.

“ I think it must be very traumatic for the counsellors because to see someone and give a result straight away must be traumatising”

“They, (the lay counsellors), need to be counselled themselves. At the end of the day you find that they need me to counsel them”.

“ The counsellors are traumatised, they need counselling. They are thinking of that kid who was HIV positive when they go home. They can't sleep thinking that it may be their kid. We should have days for these counsellors to be counselled”.

### Review of the perceptions of the lay counsellors.

The researcher facilitated a focus group to determine the lay counsellors opinions on the training, mentorship and support they had received. The main themes arising from the discussion were regarding:

- Perception of their role
- Positive experiences of the training, mentorship and support programme
- Negative experiences
- Suggestions for improvement.

#### **Perceptions on their role:**

All the lay counsellors felt that they had performed an essential service at health facilities and all generally enjoyed their work. One stated that she would “Toyi-toyi” if her contract was terminated as she felt that her clients only wished to see her. Quotations are given to illustrate their sense of fulfilment in their role:

- “I have a better understanding of the circumstances in which the client lives”;
- “I have more time available, I don’t have to rush around doing other important things”.
- “I can see clients immediately, they don’t have to wait in long queues to see me”;
- “I have better listening skills, “I listen well and can ensure privacy”.
- “People ask to see me”.
- “I get more information than a nurse. Nurses depend on counsellors to provide support to HIV positive patients”.
- “I am available for follow up and I build relations and make friends with HIV positive people. A client proposed marriage to me”.

In general, they felt that they had built relationships with HIV positive people and had “gained dignity”. They also felt that they had an opportunity to set an example as they were not rejecting HIV positive people. Clients came to their homes after clinic hours and they felt they were visible and known to their communities.

**Perceptions on positive aspects of training, mentorship and support:**

All the lay counsellors felt that their training had been very useful. They stated that the most useful learning experience was gained through sitting in with other counsellors. A few examples are used to illustrate where they found their training most useful:

After a young teenager tested positive, her mother who insisted that she saw a traditional healer, rejected her and sent her away from the area. The counsellor was concerned because the girl could not access preventive therapy. The lay counsellor stated that, because of her training, she felt confident to meet with the mother and offer counselling. After two months the girl came back with her mother and it seemed that a better understanding and acceptance by all parties had been made. The counsellor felt that her training in counselling had been crucial.

A patient tried to jump from the hospital window on hearing his positive result. The lay counsellor grabbed his collar just before he fell and called for the nurse. The situation was resolved. The lay counsellor was very shaken but felt that her training in crisis management helped in this situation.

A client ran from the clinic, climbed a tree and he threatened to hang himself. Everyone from the clinic came out to see. The lay counsellor talked to him and eventually persuaded him to come down. The client has joined a support group and visits the lay counsellor regularly. The lay counsellor felt fulfilled and felt that her training in crisis management had assisted her in being able to help this man.

### **Negative perceptions.**

The main negative themes centred around:

- uncertainty about role and perceived inadequacies in training
- insufficient support
- frustration at not being able to carry out rapid HIV tests

Three lay counsellors stated that they felt they should have had more supervised training counselling sessions. A comment was made that they should have spent more time sitting in with other counsellors and less on role- play. Another commented that it would have been much easier if the trainers could speak Zulu. Most felt that a job description indicating the maximum number of clients that they see a day would have been very useful. They also felt that the briefing of staff at health facilities about the lay counsellors, prior to their starting work, had been insufficient. Quotations are used to illustrate these themes:

“The nurses did not know enough about us before we started. There was a lack of proper introduction. They said “Where is your staff card?. You can` t work here without a staff card”.

“One doctor asked me to start at one end of the ward and work to the other. There were at least twenty patients. I didn` t know what I was supposed to do!”.

Incidents arose when the counsellors were expected to do abortion or rape counselling. Some felt that they had not received adequate training to handle these very delicate situations and they felt “”drained of energy”.

A few had to counsel couples with discordant results and had received no training on this.

One younger counsellor felt very uncomfortable counselling men. She felt that the nurse forced her to counsel men although she did not feel adequately prepared. She stated that a man said “I don` t want to see you, I want to speak to a grown up. What would you know?”.

A prisoner was sent for VCT before having an endoscope, he was handcuffed to a prison warden. The room was very small and the lay counsellor felt uncomfortable as the prisoner did not want to be tested for HIV. She did not know how to respond to this situation. She did not feel assertive enough to refuse to counsel this man.

A nurse said to the client “told you so” on hearing a positive result. The lay counsellor felt inadequate to cope with this nurse.

Two counsellors experienced difficulty with the support system.

In one instance the lay counsellor stated that the nurse tried to sell the “African Potato” although the nurse knew that the clients have no money. The lay counsellors felt uncomfortable with this practice but did not know what to do.

One client threatened to shoot a lay counsellor if he was HIV positive. She was thankful that his result was negative. She had however intense fear when she thought another emotional client carried a gun. It turned out to be a cell phone but her fear was real and very intense. She felt that the support offered to her by the nurse was insufficient, as the nurse did not appear to listen to her problem. The lay counsellor said “I needed Panado, Allergex and Cough Mixture to help me sleep”. She went to see a General Practitioner and needed tranquillizers for a period of time.

Some lay counsellors were frustrated that they could not perform the rapid HIV tests. They stated that after receiving pre-test counselling, a client had to join a queue in order to see a nurse. In one clinic, all the clients had to wait “in a special queue” until lunchtime to be tested. The lay counsellors felt that they could carry out the rapid HIV tests themselves. They felt that there would be less break in communication if they could make use of the rapid HIV tests. They experienced some negative issues around HIV testing and stated that if they had to give several positive results in a row, it became very stressful for them and they needed to take some time off.

#### Suggestions for improvement.

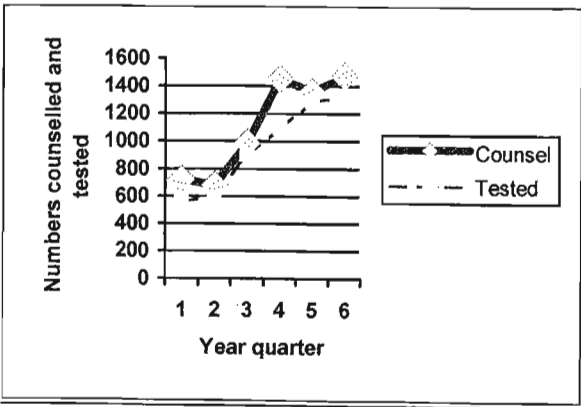
The lay counsellors stated that there should be a dedicated system in place to support them. They felt that there should be readily available external support as it was sometimes difficult to rely on a busy clinic nurse. They stated that the monthly meetings were useful and that it was important to have time off from counselling duties and suggested that a more formal system of support would have been useful. Regular individual de-briefing sessions were requested.

4.4 Ascertain whether the use of lay counsellors increases access to VCT.

The results of a retrospective review of the counselling questionnaire are presented. In addition, a comparison was made of the number of clients accessing the VCT service at UGU with the numbers accessing VCT at the other South African ProTEST sites, (where lay counsellors were not available).

Results of retrospective review of the counselling questionnaires.

During the eighteen month study period 8 359 individuals received counselling at participating health facilities, which gives an average of 490 per month. The number of people counselled per quarter increased over time from 721 in the last quarter of 1999 to 1472 in the first quarter of 2001. A total of 864 (10.3%) refused testing after counselling and 7 495 (89%) accepted testing. The numbers of people counselled and tested over the study period is indicated Figure 6, (the study period is divided into six yearly- quarters).



**Figure 6. Number of people counselled and tested per quarter  
(September 1999- April 2001)**

The uptake of VCT increased over the study period. The majority of people received counselling from lay counsellors (7 545; 90.3%) with 799 (9.6%) being counselled by a nurse and only 15 (0.2%) receiving counselling from a doctor.

In summary, the results indicate that the numbers of people counselled and tested increased after introduction of lay counsellors, and that a person was much more likely to be counselled by a lay counsellor than by any other type of counsellor.

Comparison of numbers tested at UGU with numbers tested at other South African ProTEST sites.

Results of the number of people tested per type of counsellor and the average number counselled per counsellor in South African ProTEST sites are summarised in Table iv.

**Table iv: Number of people counselled per type of counsellor and average number counselled per counsellor at the South African ProTEST pilot sites (Sept 1999- April 2001).**

| ProTEST SITE                  | Designation and number of counsellors | Total counselled | Average number of people counselled per counsellor. |
|-------------------------------|---------------------------------------|------------------|---|
| UGU South                     | 10 Full time lay counsellors          | 8 359            | 536   |
| Langa District<br>(Cape Town) | 12 Full time lay counsellors*         | 6 350            | 529   |
| East London                   | 15 Nurses                             | 4 285            | 285   |
| Bushbuck Ridge                | 8 Nurses                              | 1 247            | 160   |

- Langa also employed lay counsellors after the first three months of the study period  
(Lay counsellors started in Langa in January 2000)

These results indicate that a lay counsellor counselled more people than a nurse counsellor.

4.5 Determine the reasons for accessing VCT, demographic profiles and medical conditions of clients who use VCT.

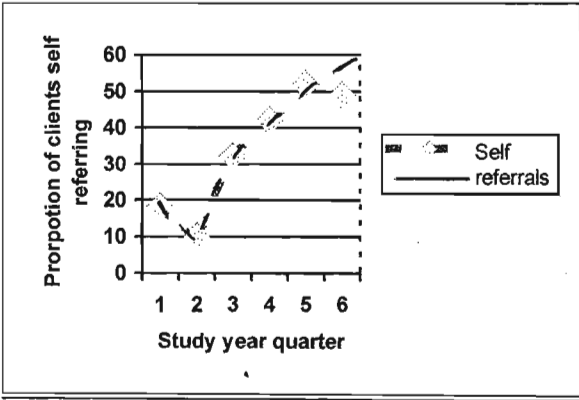
A retrospective analysis of counselling questionnaires was used to determine the reasons why clients access VCT, their demographic profiles and medical conditions. The results are presented as follows:

- \*Reasons for accessing VCT
- \*Medical diagnosis
- \*Reasons for self- referral
- \*Site of counselling and testing and type of referral
- \*Refusals
- \*Gender
- \*Age.

Over the study period a total of 8 359 individuals received counselling and 7 495 (89.6%) were tested. 864 people refused testing (10.1%) and a total of 3 738 people tested HIV positive (50.1%). An overall summary of the findings for this section is presented in Table ix (page 57).

Reasons for accessing VCT.

The main reason why a client accessed VCT was because he/she had a medical problem and was referred for HIV testing (5 860; 70%). About a third of clients self- referred for HIV testing 2 491 (30%). The proportion of referrals who self- referred for testing increased over time from under 20% in the first quarter of the study to between 40 and 50% in the last quarters of the study. This information is illustrated in Figure 7.



**Figure 7: Proportion of people who were self- referred per year quarter (Sept 1999- April 2001).**

Significantly more women were self- referred (1 751; 32.5% of women) than men (713; 24.8%), p=0.001.



### Medical diagnosis.

Almost a quarter of the people who were medically referred had a Sexually Transmitted Infection (STI) (1 175; 20.1%). A quarter of people who were medically referred had a diagnosis of “other ”listed (1 487; 25.4%). The main reasons given for medical referral and the numbers (%) of clients per medical condition who were HIV infected is outlined in Table v.

**Table v: Reasons for medical referral for HIV testing and the number (%) per medical condition who were HIV infected.**

| Reason for referral | Number of referrals (% of medical referrals) | Number (% HIV infected) |
|---------------------|--|-------------------------|
| STI                 | 1 175 (20.1)                                 | 620 (52.8)              |
| TB                  | 956 (16.3)                                   | 559 (58.5)              |
| ANC                 | 557 (9.5)                                    | 209 (37.6)              |
| Cough               | 480 (8.2)                                    | 252 (52.7)              |
| Ill looking         | 298 (5.1)                                    | 104 (35.2)              |
| Weight loss         | 289 (4.9)                                    | 161 (55.8)              |
| Diarrhoea           | 268 (4.6)                                    | 170 (63.8)              |
| Warts               | 124 (2.1)                                    | 77 (62.8)               |
| Lymphadenopathy     | 99 (1.7)                                     | 70 (71.0)               |
| Rape                | 67 (1.1)                                     | 15 (23.4)               |
| Herpes              | 56 (1.0)                                     | 39 (70.4)               |
| Other               | 1 487 (25.4)                                 | 676 (45.4)              |
| Total               | 5 855 (100)                                  | 2 535 (43.3)            |

Just under a half of the people who were medically referred tested HIV positive (2 535; 43.3%). A large proportion of people who were tested for the following reasons were HIV-infected:

\*lymphadenopathy

\*herpes

\*diarrhoea

\*warts.

Over half of the people who had an STI or TB were HIV positive: 52.8% and 58.5% respectively.

### Reasons for self-referral.

A third of clients who self-referred for HIV testing did so as a result of health education (829; 33.3%) and this was the single most common reason given for self-referring. Almost a third of those who self-referred did not give a reason, or the reason for referral was listed as “other” (764; 30.6%).

The number (%) of people self-referring per reason given, and the proportion who were HIV infected per reason is summarised in Table vi.

**Table vi: Number (%) of people self- referring per reason given and number (%) who were HIV infected.**

| Reason for self-referring              | Number of referrals<br>(% of all self-referrals) | Number (%) HIV infected |
|--|--|-------------------------|
| As a result of health education        | 829 (33.3)                                       | 408 (49.3)              |
| No reason given                        | 563 (22.6)                                       | 236 (42.1)              |
| Client is ill                          | 357 (14.3)                                       | 248 (69.5)              |
| Worried about own risk behaviour       | 307 (12.3)                                       | 144 (47.1)              |
| Worried about partners risk behaviour. | 149 ( 6.0)                                       | 56 (37.8)               |
| Partner ill or has died                | 51 ( 2.0)  | 30 (60.0)               |
| Baby ill or has died                   | 34 ( 1.4)  | 26 (76.3)               |
| Other                                  | 201 ( 8.1)                                       | 59 (29.3)               |
| Total                                  | 2 491  | 1206 (48.2)             |

Just under half of those who self-referred were HIV positive (1 206; 48.2%). If a client self-referred because he/she was ill or because their partner (or baby) had died, then they were likely to be HIV infected.

The proportion of medically referred clients who tested HIV positive (2 535; 43.3%) was not significantly different to the proportion of self-referred clients who tested HIV positive (1 202;48.2%),  $p < 0.01$ .

### Site of counselling and testing.

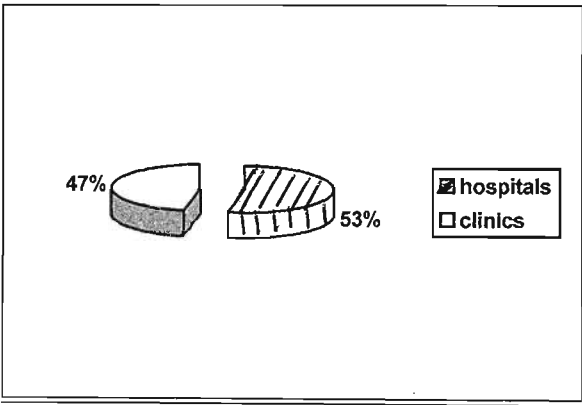
The hospital sites accounted for 3 514 (42%) of those counselled and Port Shepstone Hospital accounted for almost one third of counselled patients (2 630; 31%). The rest of the clients counselled were spread among the clinic sites. Information on number of people counselled, number refusing and the HIV result per study site is summarised in Table vii

**Table vii: Number of people counselled, refusing (%) and HIV result per study site site.**

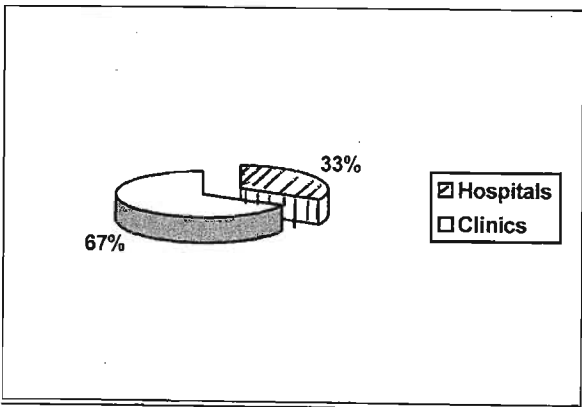
| Study site       | Numbers counselled/refusing |                 | HIV Status                         |                |                |
|------------------|-----------------------------|-----------------|------------------------------------|----------------|----------------|
|                  | No counselled               | No refusing (%) | No (%)<br>Indeterminate<br>results | No HIV +ve (%) | No HIV -ve (%) |
| Port Shepstone   | 2 630                       | 261 (9.9)       | 150 (5.7)                          | 119 8 (45.6)   | 1 201 (38.8)   |
| Gamalacke        | 848                         | 299 (29.2)      | 11 (1.4)                           | 270 (34.2)     | 280 (35.4)     |
| Borough          | 818                         | 10 (1.3)        | 15 (2.0)                           | 380 (50.1)     | 355 (46.7)     |
| Bomela           | 745                         | 25 (3.6)        | 20 (3.0)                           | 342 (49.8)     | 318 (46.3)     |
| Murchison<br>ANC | 601                         | 50 (8.3)        | 20 (3.1)                           | 211 (35.1)     | 338 (56.2)     |
| Entabeni         | 524                         | 56 (12.0)       | 3 (0.6)                            | 260 (55.8)     | 147 (31.6)     |
| Margate          | 510                         | 92 (18.0)       | 6 (1.3)                            | 252 (55.2)     | 185 (41.1)     |
| South port       | 432                         | 91 (24.3)       | 1 (0.3)                            | 114 (30.5)     | 168 (44.9)     |
| Murchison TB     | 364                         | 35 (9.6)        | 26 (7.1)                           | 183 (50.3)     | 120 (33.1)     |
| Marburg          | 365                         | 5 (1.6)         | 4 (1.3)                            | 132 (43.1)     | 166 (54.1)     |
| Boboyi           | 329                         | 27 (10.3)       | 4 (1.5)                            | 148 (54.6)     | 119 (43.9)     |
| Total            | 8 359                       | 864 (10.3)      | 233 (2.7)                          | 3 738 (51.4)   | 3 524 (48.5)   |

Site of testing and type of referral:

Just over half of the medically referred clients were tested at a hospital (3 105; 53%) and the majority of self-referred clients (1944; 67.5%), were tested at clinics. A self- referred client was much more likely to be tested at a clinic,  $p=0.001$ . The proportion of medical referred clients tested at hospitals and clinics is illustrated in Figure 8 and the proportion of self-referred clients tested at hospitals and clinics in Figure 9.



**Figure 8: Proportion of medical referred clients who were tested at hospitals or clinics.**



**Figure 9: Proportion of self-referred clients who were tested at hospitals or clinics.**

### Refusal .

A total of 864 people who were counselled refused to have a test (10.3%). The refusal rate varied greatly between health facilities with a range of 29% at Gamalacke to 1.3% at Borough Clinic. Medically referred clients were more likely to refuse (831; 14%) than the self referred clients (33; 1.3%),  $p= 0.001$ . The largest single group refusing tests had an STI (378; 43%). Clients with TB were the second largest group to refuse testing after counselling (120; 13%). The majority of clients refusing were women, (516; 59.7%). However, a man was much more likely to refuse a test (348; 12%) than a woman (516; 9.4%),  $p=0.001$ . The number of clients refusing at a hospital site was less than that at clinic sites, (346; 9.9%) versus (518 ;11.3%),  $p<0.05$ . The majority of people who refused testing did not give a reason, or the reason was listed as other” (453; 52.4%). The single most common reason given for refusing an HIV test was that there was no perceived benefit to knowing HIV status (178; 20.6%). The second most common reason was concern about the partners’ reaction (95; 11.0%). The numbers (%) refusing per reason given, are listed in Table viii.

**Table viii: Numbers of clients (%) refusing test per reason given for refusal.**

| Reason for refusal              | Number refused (%) |
|---------------------------------|--------------------|
| No perceived benefit            | 178 (20.6)         |
| Worried about partners reaction | 95 (11.3)          |
| Knowledge will hasten death     | 70 ( 8.1)          |
| Concern about confidentiality   | 47 ( 5.4)          |
| Attitude of health worker       | 21 ( 2.4)          |
| No reason and other             | 453 (52.4)         |
| Total                           | 864 (100)          |

HIV prevalence and gender.

Overall, 7 495 people were tested for HIV and 3 738 (50.1%) tested HIV positive. Two thirds of people counselled were women (5 472; 66%) and one third were men (2 879; 34%). The prevalence of HIV infection among women tested was 52% (2 845) and among men was 46% (1 324),  $p=0.001$ . A woman was more likely to be HIV infected than a man.

Age and HIV test result.

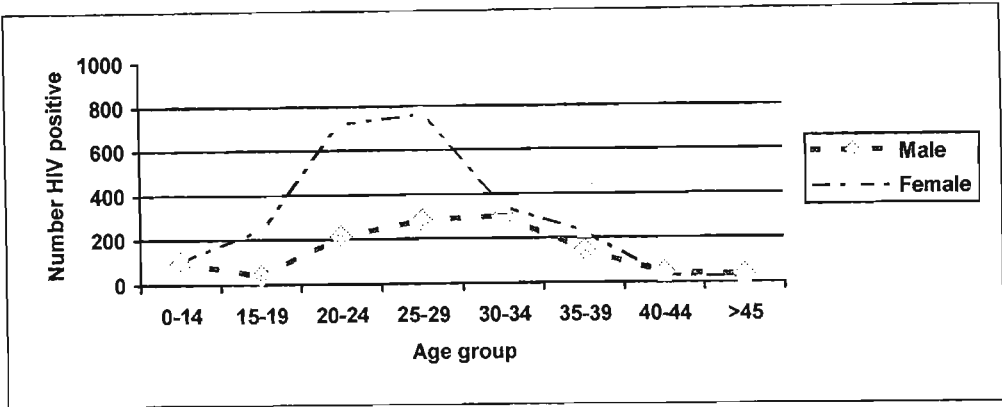
The age distribution of those counselled, and the proportion per age group who were HIV infected, is summarised in Table iix.

**Table iix. Number of people per age group tested and number (%) who tested HIV positive.**

| Age group (years) | Number tested<br>(% of total tested) | HIV infected number (%) |
|-------------------|--------------------------------------|-------------------------|
| 0-14              | 485 ( 6.4 )                          | 213 (43.9)              |
| 15-19             | 1016 (13.5)                          | 312 (30.1)              |
| 20-24             | 1093 (14.5)                          | 87 9 (46.1)             |
| 25-29             | 1753 (23.3)                          | 956 (54.4)              |
| 30-34             | 1054 (14.7)                          | 554 (48.1)              |
| 35-39             | 872 (11.4)                           | 395 (45.3)              |
| 40-44             | 428 ( 5.4)                           | 202 (44.0)              |
| 45-49             | 275 ( 3.6)                           | 103 (33.9)              |
| > 50              | 388 ( 4.9)                           | 124 (29.7)              |
| Total             | 7 495                                | 3738 (49.8)             |

The single largest age group tested was aged 25-29 years (1 753;23.3%). The proportion of people who were infected per age group ranged between 54.4 % (age 24-29) and 29.7% (aged>50 years)

The numbers of males and females per age group who tested HIV positive are illustrated in Figure 10.



**Figure 10: Number of males and females per age group who tested positive for HIV infection.**

The single largest group of HIV-infected females was aged 25-29 years (798; 14.5%) and the largest single group of men to test HIV positive was aged 30-34 years (285; 10%). The average age of an HIV positive female was 28 years and of an HIV positive male was 33 years.

The following table provides a summary of the main findings from section 4.5.

**Table ix. Summary of main findings from section 4.5.**

| Variable  | Result        |
|---|---------------|
| Total counselled                                  | 8 359         |
| Total tested                                      | 7 459 (89.6%) |
| Total refusing                                    | 864 (10.3%)   |
| Overall HIV prevalence                            | 3 738 (50.1%) |
| Proportion counselled who were medically referred | 5 860 (70%)   |
| Proportion counselled who were self-referred      | 2 491 (29.8%) |
| Proportion of medical referrals who tested HIV +  | 2 535 (43.3)  |
| Proportion of self referral who tested HIV +      | 1 206 (48.2%) |
| Proportion of total counselled who were women     | 5 472 (66%)   |
| Proportion of total counselled who were men       | 2 879 (34%)   |
| Proportion of women tested who were HIV +         | 2 845 (52%)   |
| Proportion of men tested who were HIV +           | 1 342 (46%)   |

4.6 Monitor TB case finding and TB treatment rates during the study time.

The results of a retrospective review of the TB registers, used by the National TB Control Programme, for study sites is presented. The results are aggregated into Figure 11 and Table x.

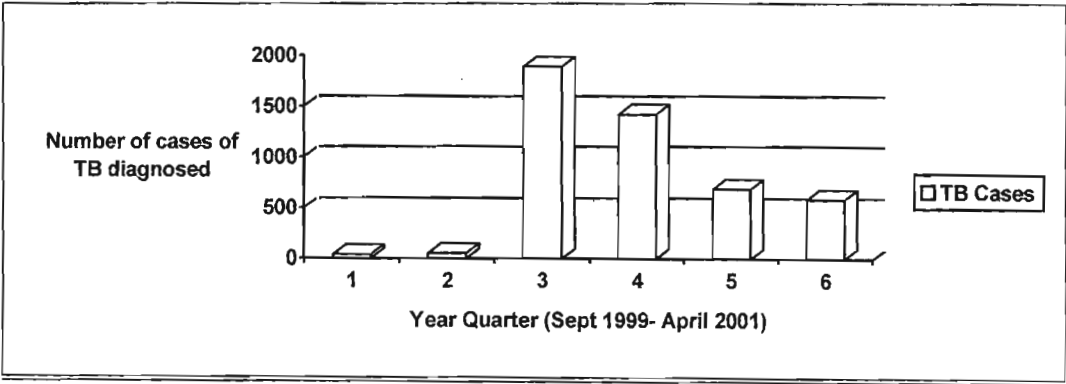


Figure 11: Number of cases of TB diagnosed per year quarter (September 1999- April 2001).

There was no consistent trend in the numbers of cases of TB diagnosed at the study sites over the study period. The numbers (%) of the above cases who were recorded as having completed treatment is summarized in Table x.

Table x: Number of cases (%) of TB who were reported to have completed treatment (September 1999- April 2001).

| Year quarter of study period | Number of cases of TB diagnosed at study sites. | Number (%) of cases completing TB treatment. |
|------------------------------|---|--|
| 1                            | 38  | 24 (63.4)                                    |
| 2                            | 42  | 35 (83.1)                                    |
| 3                            | 1 856   | 986 (50.4)                                   |
| 4                            | 1 358   | 867 (63.8)                                   |
| 5                            | 586   | 278 (47.4)                                   |
| 6                            | 574   | 248 (43.2)                                   |
| Total                        | 4 454   | 2 438 (54.7)                                 |

Overall, just over half of the people diagnosed with TB, over the study period, were recorded as having completed their treatment. A person was no more likely to complete treatment at the end of the study period than at the start,  $p=0.16$ .



# **CHAPTER 5**

**DISCUSSION**

**CONCLUSIONS**

**RECOMMENDATIONS**

This discussion concentrates on the implications of the results. Recommendations on the use of lay counsellors and rapid HIV tests in an expanded, integrated HIV/TB Control Programme are outlined.

#### 5.1 Use of lay counsellors and capacity of existing health care workers to cope with an expanded VCT service.

Results from quantitative and qualitative reviews indicated that nurses, in the UGU South ProTEST pilot site, did not have capacity to offer an expanded VCT service. The main reason why nurses could not offer an expanded VCT service was that they had limited time available, due to heavy workload.

The decision to use lay counsellors was based on a review carried out by an UGU South ProTEST task team. In this review, the team concluded that nurses could not be released from duty for training, however this was not explored further. In particular, a nurses' desire for training on VCT was not explored. Problems may arise if a minority of nurses were trained on VCT as the service would then be completely reliant on lay counsellors. If nurses were not trained on VCT, there may be problems among nurses and lay counsellors with role conflict. A nurse may not understand the role of a lay counsellor and feel threatened if she perceives that the counsellor knows more than her. It may be difficult for a nurse to be the overall manager of a health facility based VCT programme if she is completely unaware of the principals of the VCT programme.

If the assumptions were correct, and indeed a nurse could not be released for fifteen days, then a short course in VCT to inform nurses on the principals of VCT may help alleviate potential problems. The VCT service at health facilities was largely reliant on lay counsellors. If a lay counsellor was unavailable then the nurse could not offer VCT. An expanded lay counsellor -based VCT service may need to use "floating lay counsellors" who can temporarily work at a health facility if the permanent lay counsellor is unavailable.

In the task team review of the staff available to offer VCT services, it was concluded that no available category of health care worker in UGU South could carry out the counselling required in an expanded VCT service. However, further review of the capacity of other categories of health care workers may be useful. In particular, if existing staff such as Community Health Care Workers (CHWs) or HIV/AIDS Educators (HACS) could incorporate counselling into their duties, then an extra category of personnel (lay counsellors) would not be necessary.

In this study the lay counsellors were placed at health facilities, however the use of CHWs or HACS may lead to a more community based VCT programme in that CHWs and HACS may be able to offer counselling in peoples homes. If DOTs volunteers were trained in HIV counselling, then there may be increased links between the TB and HIV programmes.

The lay counsellors signed a contract of confidentiality with South Coast Hospice. There were no reviews to assess if confidentiality had been respected. The lay counsellors are not part of a formal organization and are not bound by regulations, such as the Health Professionals Council. If the lay counsellor programme were expanded then work contracts would have to include issues around confidentiality, and the employer would be aware of what action should be taken if there was a breach in confidentiality.

In this study lay counsellors were paid 1200 Rand per month, without Medical Aid or pension. This salary was slightly less than that received by a CHW or HAC. The lay counsellors had been previously unemployed and were grateful for employment. However, over time, given the stress of their role and responsibilities, they may become less satisfied with this salary and with conditions of employment (no pension or Medical Aid). The Department of Health must consider these issues if these lay counsellors are to be employed on a larger scale.

A formal work-study exploring the duties of other categories of health care workers may clarify if their duties could be expanded to include counselling. In particular, the effectiveness of the current role of CHWs and HACS could be determined and decisions made on whether they may be more effectively used in a VCT service.

The costs of running a VCT programme using lay counsellors must urgently be explored and a study comparing the cost of VCT offered by lay counsellors to that offered by other categories of health care workers undertaken. A cost effectiveness study of lay counsellors would be vital to allow for effective plans for roll out of a lay counsellor-dependent VCT service to be developed.

In this study the task team determined selection criteria for lay counsellors. The selection criteria may not be able to be used in other districts as the team selected volunteers who had been trained in HIV/AIDS and who were known to the task team. Some research has been carried out into personal qualities that indicate ability to offer good counselling, (for example older people who have experienced death of a close relative are generally better at counselling than younger inexperienced people).<sup>31</sup>

A further review of literature on essential qualities for counselling and a review of these lay counsellors may assist in drawing up selection criteria that is of use on a wider scale.

A job description was not drawn up for lay counsellors and this created problems. In particular, a lack of an indication of the expected maximum number of clients to be counselled daily was problematic. Further research into the maximum number of clients that should be seen by lay counsellors may be indicated. A job description would be essential if lay counsellors are to be used on a large scale.

A review of the opinions of clients on the lay counsellors was not undertaken, nor client preference for counselling assessed. Knowledge of client opinion of lay counsellors is crucial prior to expansion in the use of lay counsellors.

### 5.2 Rapid HIV tests.

Both health staff and lay counsellors accepted and preferred the rapid tests. There was no review of the acceptability to clients. A study on client's preferences for test type is indicated before large-scale use of rapid HIV tests is undertaken.

In this study, the lay counsellors expressed a desire to carry out the rapid HIV tests as they felt there would be more continuity of service, and client-waiting time would be reduced. Consideration may be given to changing the Health Professional Councils ruling on testing, however this might necessitate availability of post exposure prophylaxis for needle stick injury. Throughout this study, there were no funds available for management of needle-stick injuries. The Department of Health offers anti-retroviral prophylaxis to employees and provision might need to be made for needle-stick prophylaxis for the lay counsellors if they are to be employed in an expanded VCT service. An HIV testing device that does not use blood, (for example saliva testing), may enable the lay counsellors to be involved with the testing procedure.

The cost of using rapid HIV tests in this pilot site should be compared to that of using ELISA tests. A cost effectiveness study is essential if roll out of rapid HIV tests is planned. The methods used for ordering, delivery and stock control of tests were very specific to UGU South ProTEST pilot site. The pilot site had additional resources, which would not be available elsewhere. If the use of rapid HIV tests is to be expanded, there must be mechanisms developed for ordering, delivery and for stock control. Ideally, such mechanisms should form part of existing systems.

### 5.3 Training, support and mentorship programmes.

In the UGU South ProTEST pilot site, the lay counsellors received very specific training and as such the training curriculum developed may not be able to be used on a wider scale. In particular, the training programme had a large input in TB training from SANTA representatives. There are community based SANTA employees in UGU South who are trained as trainers, and such a resource would not be available elsewhere.

The indicators used to measure effectiveness of the training, support and mentorship programme were generally non-specific. The lay counsellors passed a written examination, which measured knowledge and not practice of counselling.

Nurses were satisfied with the quality of counselling offered by the lay counsellors, but did not actually sit in on counselling sessions. An independent assessment of the quality of counselling offered would have been useful. Interestingly, the nurses stated that interaction between the TB and HIV programmes had increased, which may reflect success of training. The opinions of the clients on the lay counsellor and quality of counselling offered were not reviewed, and such a review is essential before roll out.

The suggestions of lay counsellors should be acknowledged and their experiences used in updating the training curriculum. In this study, the lay counsellors stated that it would have been useful to spend more time observing other counsellors and have supervised counselling sessions. A further training programme would have less emphasis on role play and more emphasis on observing real situations. This training method might pose problems if training were to be on a larger scale, as supervising counselling sessions is labour intensive and there would have to be a high trainer to student ratio. Clients may object to having an external party observing their counselling session, and such a practice may detract from the ability of the client to interact with his counsellor. Video recording and analysing counselling sessions for training purposes may be useful.

The lay counsellors mentioned specific aspects of counselling that had not been covered in the training curriculum, (coping with discordant results for a couple, rape and counselling men). Future training curricula would consider this.

The support system developed was informal and relied mainly on the nurses at health facilities. If a nurse was busy, then support and mentorship of lay counsellors may be an extra burden. This aspect was not formally explored and some lay counsellors had difficulty with the nurse-based support system, as they perceived that the nurse did not have sufficient time to support them. An independent support system may be more useful for the lay counsellors. In this study, a social worker and doctor were available for support, but this system is limited to this study. As an additional means of providing support the lay counsellors were released from duty on the last Friday of every month. This system however, may lead to a lack of continuity of VCT, and put pressure on nurses as clients arrived for VCT when the lay counsellor was unavailable. A health facility based support system, where the supporter comes to the health facility, might be more appropriate.

In this study, the lay counsellors requested individual support sessions. Nurses also indicated that there were problems with the level of support that the lay counsellors had available, and they suggested that the lay counsellors should receive more counselling and debriefing. If the use of lay counsellors were to be expanded, then a dedicated support coordinator, who visits each health facility, may be required. Development of guidelines on how to best support lay counsellors may be useful.

#### 5.4 Access to VCT.

The number of clients using the VCT service increased over the study period. The vast majority of clients were counselled by a lay counsellor, suggesting that the presence of a lay counsellor increased client access to a VCT service. However, the increase in number of clients may have occurred independently of the presence of lay counsellors. The number of symptomatic clients may have increased, and thus the number being referred for testing may have increased. Independent variables such as health education and increase in awareness may have affected the number of people using VCT. A review of the opinions of clients as to why they used the VCT service may clarify these issues.

A comparison between the ProTEST sites indicated that the number of people receiving counselling was greatest when a lay counsellor was available. Again, this finding may not be directly related to the presence of lay counsellors, as other variables, potentially impacting on VCT, were not standardised.

In this study, qualitative reviews by nurses and lay counsellors concluded that the numbers of clients using VCT had increased because lay counsellors were available.

## 5.5 Reasons for accessing VCT, demographic profiles and medical conditions of clients.

### Reasons for accessing VCT.

This study was based in health facilities and, results indicated that the main reason why a client accessed the VCT service, was because a doctor or nurse had referred them. Medical referral was significantly greater than self-referral, and may reflect the fact that the VCT service was based in a health facility.

Self-referral for testing was much more likely in a clinic than in a hospital. This may indicate that the clinic VCT system was more accessible for clients who were self motivated for VCT. In a hospital, a client has to pay and had been assessed by a doctor before accessing the VCT service. VCT service in a clinic is free and a client may have easier access to the counsellor (not have to be reviewed by a doctor first). Therefore, to enhance access for self-referred clients a clinic based VCT system may be more appropriate than a hospital based VCT system.

Results from the international ProTEST sites have indicated that self-referral for VCT is much more likely at a free-standing VCT site (not attached to a health facility).<sup>32</sup> In the Malawi ProTEST pilot site, which is based in a hut beside a taxi rank, all referrals were self-referred. In an expanded VCT programme consideration, must be given to developing freestanding sites for VCT.

The proportion of self-referred clients increased over time however; the prevalence of HIV was similar between medically referred and self-referred clients. This suggests that self-referred clients may have been referring because of the presence of symptoms. An opportunity for primary prevention of HIV is limited if most people are already infected when they go for testing. Further work needs to be carried out on attracting people for testing before they are infected. The most common reason why clients self-referred, was because of the health education talk on VCT. Education on the benefit of knowing HIV status may thus need to be expanded to schools and community centres.

Most medically referred clients had either an STI or TB. This may reflect the fact that clients with an STI or TB were actively targeted by the lay counsellors to undergo VCT suggesting, that there was success in linking the TB and HIV/AIDS Control Programmes.

### Demographic profiles of clients.

In this study, significantly more women than men used the VCT service. This may reflect the fact that more women than men used the health facility or might have indicated that female clients felt more comfortable with a female counsellor. A review of denominator data (total number of men and women using the health facility) and client preference of counsellor would clarify this issue.

The effect of using only female lay counsellors was not explored. Male clients may have found difficulty relating to a woman counsellor and conversely, the lay counsellor may have experienced discomfort in counselling a man.

The average age of people tested was twenty-eight years and the average age of the lay counsellors was thirty -eight years. Younger people, in particular teenagers, may have preferred to see a younger counsellor. A review of clients preference on the age of a counsellor would be useful.

The HIV prevalence was significantly greater in women than in men. This may be in keeping with the overall profile of the KwaZulu-Natal HIV epidemic, (more women than men are HIV infected).<sup>33</sup> Prevention strategies must be intensified and focused particularly at young women. Given the unavailability of anti-retroviral drugs, planning must provide for a means of palliative care of these infected young women, and expanded care options for orphans must be considered.

### Medical diagnosis.

Most clients who were medically referred had an STI and were therefore at increased risk of acquiring HIV infection.<sup>34</sup> The HIV prevalence was generally high among medically referred clients, however many of the medical conditions were in fact AIDS defining illnesses<sup>35</sup>. Such clients would be expected to have a high prevalence of HIV infection.

Interestingly, the prevalence of HIV in clients referred from antenatal clinics in this study was similar to the prevalence found in the annual national antenatal clinic survey for KwaZulu Natal.<sup>36</sup> The presence of lay counsellors in an antenatal clinic provides a basis for counselling in a maternal- to- child- transmission (MTCT) prevention service. Such a service may be necessary if drugs to prevent MTCT are made available in KwaZulu Natal.



### Refusal.

The most common reason for refusal was that there was no perceived benefit to knowing HIV status. This is of concern as it may reflect the knowledge or opinions of the lay counsellor. The other reasons given for refusal (knowledge of result will hasten death/ concern about confidentiality) are also cause of concern. The refusal rate varied greatly between health facilities (1.3% at Borough to 29% at Gamalacke). An independent review of the quality of counselling offered is required to clarify if there are gaps in the lay counsellors knowledge or if personal opinions are affecting her counselling.

### 5.6 Impact of the expanded VCT service on TB.

A criteria for selection as a ProTEST site was that there had to be a well functioning TB Control Programme. At the onset of this study the diagnosis of TB took place mainly at hospitals as clients who had symptoms of TB were referred from clinics to hospitals for testing. Only two clinics in the study had TB registers available. The treatment was also hospital-centred in that a client returned to the hospital every month to collect his TB medication. Thus at the onset of the study UGU South did not have a well functioning TB Control Programme.

During the course of the study a full time TB Officer was employed by the DOH and a massive training programme for TB was initiated. The diagnosis of TB at a clinic level, using sputum testing, was encouraged and all clinics were provided with TB registers.

In this study lay counsellors were trained to screen all clients undergoing VCT for symptoms of TB and to act as supporters for clients taking TB medication. Clients with TB disease were encouraged to undergo VCT. These methods aimed to increase integration between the TB and VCT programmes. A non-specific indicator was used to measure if integration had occurred in which the number of TB cases diagnosed and the number of clients completing treatment were monitored.

The numbers of TB cases diagnosed did increase dramatically over the study period however this might have been due to the presence of a full time TB Officer, increased training and introduction of a clinic TB register. The change in number of cases of TB diagnosed could not be directly attributable to the presence of lay counsellors. The proportion of clients completing TB treatment did not increase over the study period and the completion rates were below the national recommended rate of 85%.<sup>37</sup> At the end of the study the TB Control Programme did not meet national recommended minimum standards but improvements to the programme were ongoing.

A more specific indicator would be required to assess if lay counsellors have a direct impact on TB diagnosis and treatment. Measurement of number of clients, with active TB who were identified through screening and referred for testing, by a lay counsellor would be useful. The number of clients completing their treatment under supervision of the lay counsellor should be monitored.

### 5.7 Conclusions.

The main conclusions that can be drawn from this study are that nurses in the UGU South ProTEST pilot site did not have the capacity to offer an expanded VCT service and that lay counsellors could offer a comprehensive counselling service. The study indicated that if a VCT service relies heavily on lay counsellors then nurses should have basic training in VCT and a “floating lay counsellor” should be available to ensure continuation of service.

There should be a work study of CHWs and HACs and the effectiveness of their role in combating HIV/AIDS assessed. Considerations may be given to using CHWs and HACs and DOTS supporters as counsellors as the service could then be community based and linkage with TB programmes may improve.

A cost analysis of lay counsellors and review of clients’ opinions on the lay counsellors should be undertaken. If a large- scale use of lay counsellors is planned conditions of employment, job description and salaries must be reviewed. Issues around confidentiality and around accountability should be clarified. There should be an independent review of the quality of counselling offered by lay counsellors.

This study concluded that rapid HIV tests increased access to a test result and were preferred by nursing staff. A review of client opinions on the rapid HIV tests should be undertaken. Consideration may be given to exploring the ability of lay counsellors to perform the rapid test procedure or alternative testing methods which do not rely on blood samples (for example saliva testing) may be introduced. The cost of using rapid HIV tests should be compared to the costs of using other test types. If large- scale roll out of HIV tests is planned there must be sustainable systems for ordering, delivery and for stock control of the tests.

The training curriculum developed for lay counsellors should be expanded and made more generalizable. The content must consider the experiences and suggestions of lay counsellors in this study. A formal support system should be developed for lay counsellors and there should be a dedicated support counsellor who is available for the lay counsellors at their place of work.

This study strongly suggested that access to VCT services increased due to the presence of a lay counsellor and consideration should thus be given to increasing the numbers of lay counsellors. To increase access for self-referral the VCT service should be focused at clinics, rather than at hospitals and consideration should be given to developing freestanding VCT sites.

There should be ongoing education programmes, aimed at the youth, highlighting the advantages of knowing HIV status. Education programmes on VCT must be expanded beyond health facilities.

The impact of using men and younger lay counsellors in the VCT service should be explored.

There should be ongoing training and monitoring of the TB Control Programme in UGU South to enable the programme to meet the national minimum standards of treatment completion rates. A review to measure the specific impact of lay counsellors on the number of cases of TB diagnosed and on proportion of clients completing TB treatment should be undertaken.

### 5.8. Recommendations arising from this study.

Recommendations arising from this study are presented as follows:

It is recommended that further studies be carried on the capacity of nurses to offer an expanded VCT service, as the results from this site may not be generalizable.

The study strongly suggested that the presence of lay counsellors increased access to a VCT service. However, prior to wide spread use of lay counsellors it is recommended that the following reviews be undertaken:

- \*The capacity of other categories of health care worker to offer VCT.
- \*Opinions of clients on lay counsellors.
- \*Cost effectiveness of using lay counsellors compared to using other categories of health care workers.
- \*Quality of counselling offered by the lay counsellors
- \*Impact of using male and younger lay counsellors.
- \*Specific impact of lay counsellors on numbers of cases of TB diagnosed and on proportion of clients who complete their treatment.

If lay counsellors are to be used on a large scale it is recommended that there be:

- \*A training programme for nurses, which covers basic aspects of VCT.
- \*A “floating lay counsellor” to ensure continuation of service.
- \*Consensus on job description, conditions of employment and salaries.
- \*A system for accountability and action plans available in case of breach of confidentiality.
- \*Standardised pre-employment selection criteria for lay counsellors.

- \*A review of the lay counsellor training curriculum taking into account the experiences of the lay counsellors who were involved in this study

- \*A dedicated facility based support system for lay counselors.

The rapid HIV tests were acceptable to health care workers and increased access to an HIV test result. Prior to large-scale use of rapid HIV tests the following recommendations are made:

- \*There should be a review of the opinions of clients on the rapid HIV tests.

- \*A pilot research project on the ability of lay counselors to carry out the rapid HIV tests should be undertaken.

- \*Consideration should be given to using other types of rapid HIV test, which do not involve blood products, so that the lay counselor could carry out the test.

- \*A cost study comparing the cost of rapid HIV tests to the cost of other test types should be undertaken.

- \* A sustainable system for ordering, delivery and stock control of rapid HIV tests be developed.

Further recommendations arising from the study are that:

- \*There should be a freestanding site for VCT

- \*Education programmes on VCT should be expanded from health facilities to schools and youth groups.

- \*There should be ongoing training and monitoring of the TB Control Programme in UGU South

- \*A specific indicator should be developed to measure collaboration between HIV/AIDS and TB Control Programmes.

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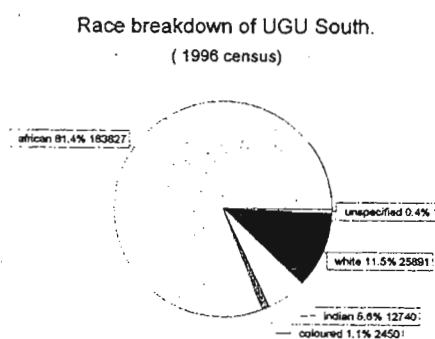
## Appendix 1. Overview of UGU South Health District.

### Geography:

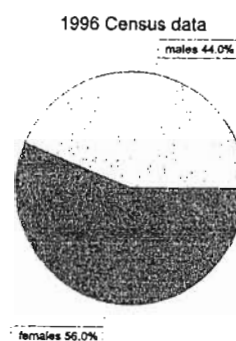
UGU South is situated in Region A in KwaZulu-Natal and is one hour south of Durban. The district covers an area of 600 km<sup>2</sup> and includes a coastal strip which is heavily urbanised. The district includes the towns of Port Shepstone, Margate, Ramsgate and Port Edward. Harding town forms the inland border of the district. The majority of the population live in rural areas, however there is a large peri-urban settlement, (Gamalake). There is little industry and employment opportunities are scarce.

### Demography:

The exact population of UGU South is not available from the 1996 census data as the boundaries for the health district were developed after this census. The UGU South district generally corresponds to the old Port Shepstone / Port Alfred magisterial districts so this data will be used to represent UGU South. Local sources state that this data is an underestimation of the population size and does not account for cross border utilization of services from clients in the Eastern Cape. The total population was given as 225 910 in the 1996 census. A breakdown by race and gender is represented below.



### Gender breakdown of UGU South

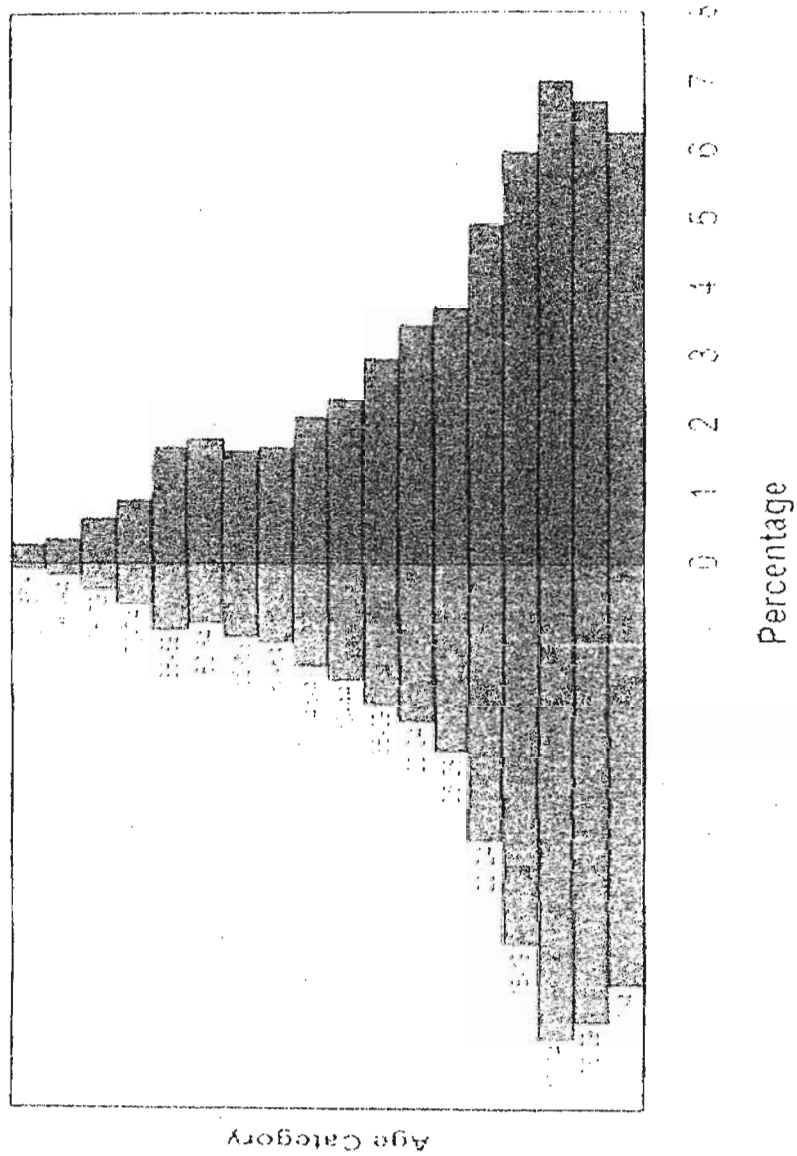


Total = 225 916

**Race and gender population breakdown of UGU South population 1999.**

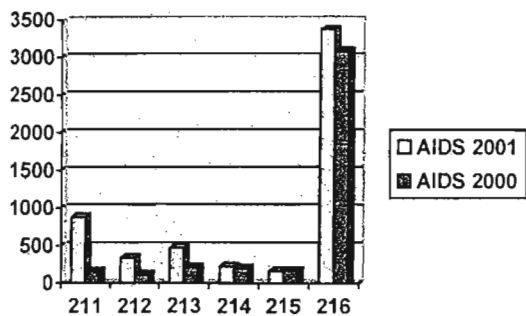
A population pyramid indicates that the population is fairly typical of that in a developing country.

UGU - POPULATION - 2002 Mid Year Estimate



HIV/AIDS:

The recorded numbers of AIDS clients in UGU South, per municipality is recorded below. These figures may reflect the capacity for HIV testing, (VCT), in the municipality rather than the prevalence of cases. In addition the municipalities, which have hospital, may have a higher case- load due to referral of clients with AIDS to hospitals.

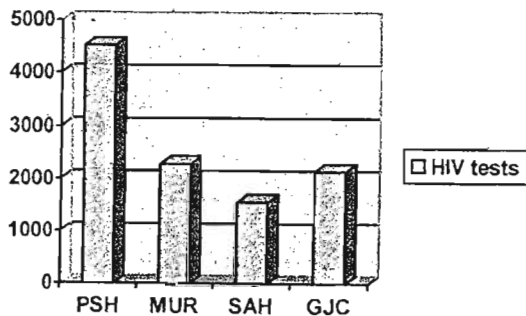


Source: Regional Health Department statistics

Graph: Number of AIDS cases per municipality 2001.

HIV Testing.

The number of clients tested for HIV at each hospital is summarized below.

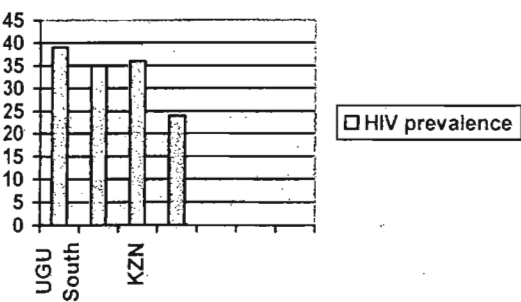


Graph: Number of clients tested at each hospital (2000)

In 2000 a total of 13361 ELISA tests were carried out at Port Shepstone Regional Laboratory and 7246 were positive. The prevalence among those tested at hospitals was thus 57%. This may represent symptomatic clients.

**HIV prevalence in antenatal clinic attendees.**

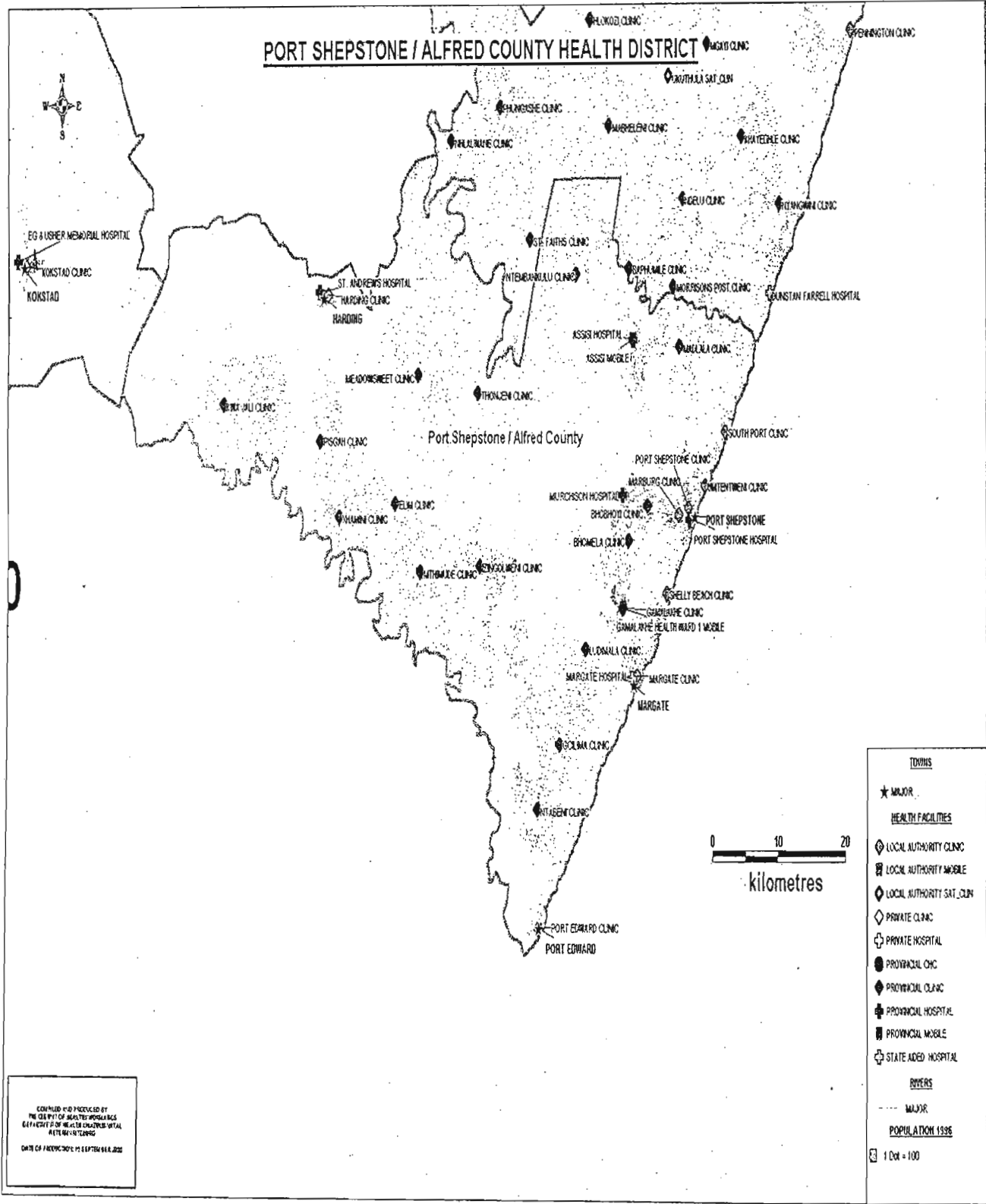
As part of the national ANC HIV prevalence study blood samples are tested anonymously at health facilities. Testing for 2000 is indicated in the graph below.



HIV prevalence 2000 (UGU South, Region A, KZN and nationally)

Source: Department of Virology, Nelson R Mandela school of Medicine. University of Natal

Appendix 2.  
Map of Health Facilities in UGU South.





## Appendix 3

### **Counselling information and consent form. UGU South ProTEST Site.**

You have come for counselling to find out about HIV. I would like to read through this document with you so you may understand about HIV counselling and testing. Please ask me questions if you do not understand.

#### *What is counselling?*

HIV disease is a very serious disease for which there is no cure. I want to tell you more about this disease so you can decide if you want to be tested for HIV or not. This is called pre-test counselling. If you are tested we will discuss the result, this is called post-test counselling.

#### *Who am I?*

I am a lay counsellor for HIV. I am not a nurse. I have been trained on counselling. If you prefer to see a nurse I will refer you to one now.

#### *What will I do?*

I will counsel you about HIV so you can reach a decision as to whether you want to be tested or not.

#### *Can you refuse the test?*

Yes, most definitely. If you decide to refuse a test there will not be a problem. I will refer you back to the nurse. The care offered to you by the nurse will not be affected by your decision not to be tested.

#### *Can you decide later?*

Yes, most definitely. You can go home and think about counselling and testing. You are welcome to come back at any time to see me.

#### *Will I discuss your result with anyone?*

I will not discuss your HIV test result with anyone unless you ask me to. I may however, encourage you to discuss your result. I may discuss the findings of your result with a nurse.

#### *What will the test entail?*

When you have been pretest counselled you will decide whether you want to be tested or not. If you decide that you want to be tested I will send you to a nurse, as I can not take a blood sample. The nurse will take a drop of blood from your finger using a sharp needle. This may be a bit uncomfortable and may bruise. The nurse will use this blood to test you for HIV. In some instances she may need to take another blood sample from your finger. The result should be available within fifteen minutes. The nurse will put your test result in an envelope and give the envelope to me. I will discuss the test result with you.

*Are the tests accurate?.*

Yes. I believe that the tests are accurate. Sometimes, if the nurse is worried about the test, she will take blood from your arm and send it to the hospital. You will asked to return for your results.

*Can anything be done if I am HIV positive?*

Yes I can give you advice on how to stay healthy. Drugs are available, not to cure the disease, but to help you stay well. I can refer you to a support group.

Have you any questions you would like to ask me?

Please sign below

I, (name)----- agree to be pretest counselled by this lay counsellor

(Lay counsellors name)-----.

Clients signature

Date

Place

Witness signature and name

Date

Place

**After pretest counselling:**

I, (name) ----- have been pretest counselled and agree to have an HIV test.

Clients signature

Date

Place

Witness signature and name

Date

Place

## The Abbott Determine Rapid Test

Appendix 4

- Detects antibodies to HIV-1 & HIV-2 from serum, plasma or whole blood
- When the sample is placed on the sample pad, it migrates through the pad.
- If the sample contains HIV antibodies these mix with the antigen conjugated within the pad; when this occurs a chromatographic reaction takes place producing a red line in the patient window.
- A line in the control window ensures validity of the tests
- The Abbott Determine is a very sensitive test and it is therefore used as the screening test

### **Precautions**

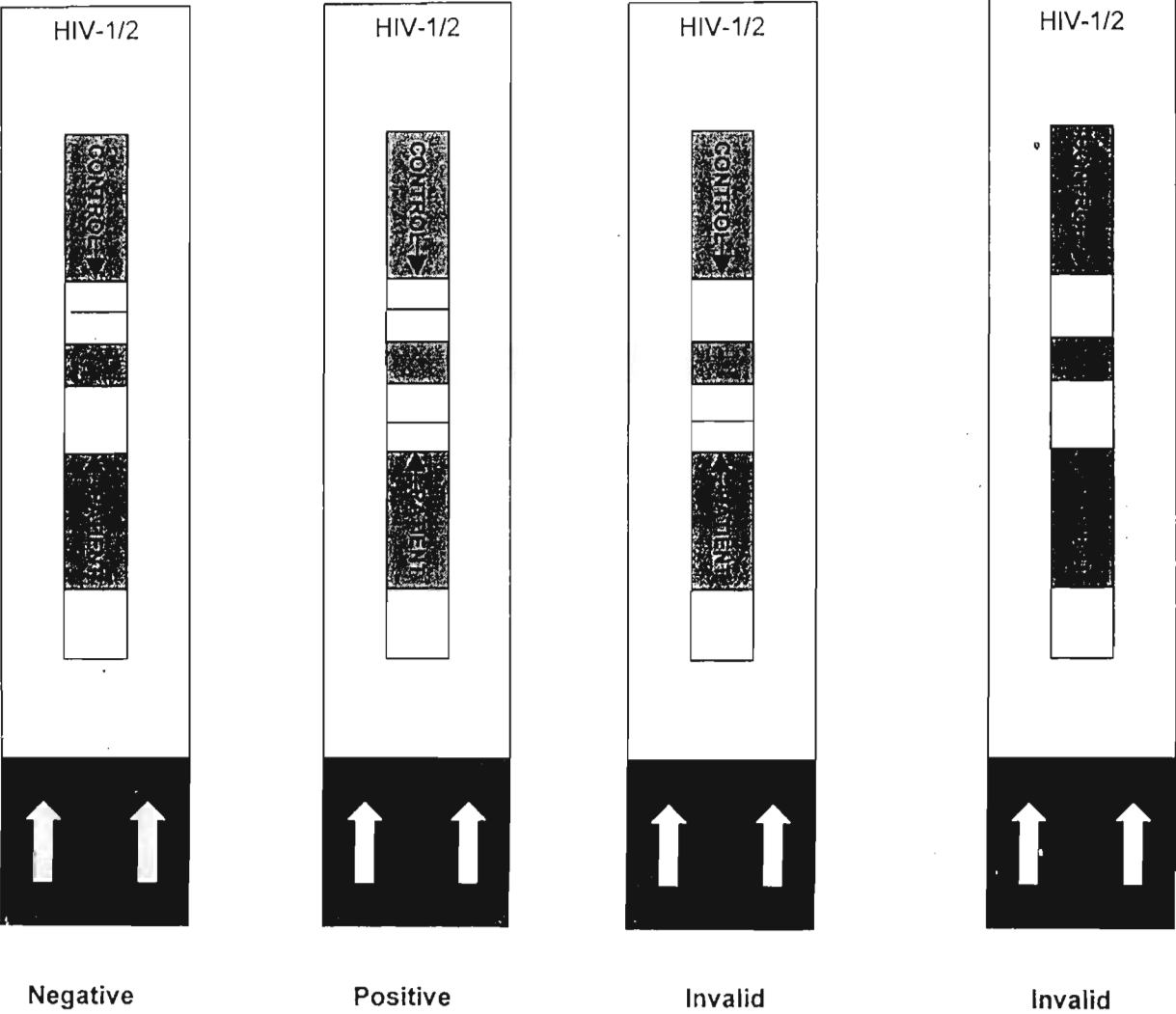
- Universal precautions apply (including the use of gloves)
- Beware of sharp injuries (eg. glass capillary tubes)
- Do NOT pipette by mouth
- Decontaminate spills
- Ensure appropriate disposal of sharps and blood products

### **Storage**

Kits and buffer can be stored at 2-30°C and must be used prior to the expiry date on each pack.

### **Method**

- Remove an individual test strip from the pack
- Remove the protective foil cover from the test strip and attach the strip to a surface with a sticker
- Label the sticker with the client's code / folder number
- Clean client's fingertip with alcohol swab and allow to air-dry
- Prick fingertip with lancet; dispose of lancet
- Collect 50 micro-litres of blood in the glass capillary tube: the black lines on the tube measure 50 micro-litres from each end; ensure that blood is collected to between the two black lines
- Apply the end of the capillary tube to the sample pad above the arrows
- Wait until the whole sample is drawn into the pad (the last drop is difficult to get out; ensure that this has been compensated for when drawing blood into the capillary tube)
- Apply one drop of chase buffer to the sample pad and note the time on the sticker
- Read the results after 15 minutes. If the kit has been left for more than 2 hours before reading, the test needs to be repeated.
- Ensure that the control bar is positive to confirm the validity of the test
- Dispose of test once the results have been recorded

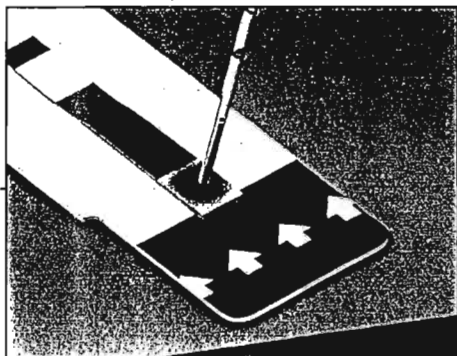


**Additional Points for Consideration**

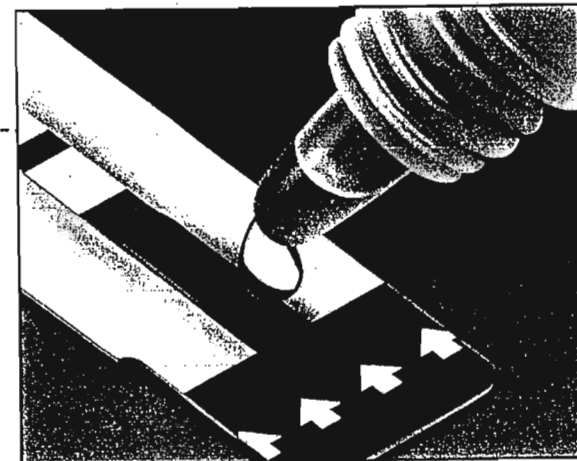
- No test is 100% accurate
- Always confirm positive results with another test
- Remember the “window period” – this reflects the time taken for the individual to start producing antibodies and the ability of the test to detect these antibodies in the blood. For practical purposes this is taken as 12 weeks
- Remember that antibody and not virus is being detected
- The intensity of the bar does not correlate with antibody titre; even a faint bar in the patient window indicates a positive test



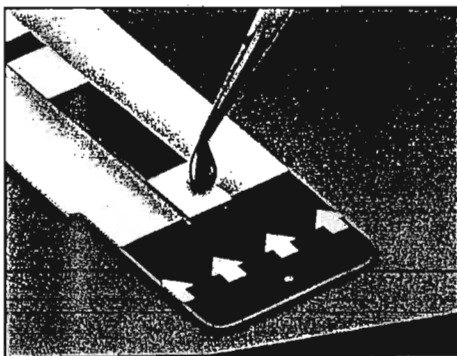
Fingerstick sample collection



**3.** Add sample, (50 $\mu$ L) to sample pad  
(Fingerstick method)



**4.** Add chase buffer - one drop



**3.** Add sample, (50 $\mu$ L) to sample pad  
(Venipuncture method)

**1 minute**



# Smart Check HIV 1 & 2 Rapid Cassette

Catalog # 06021004IRT

## Procedure

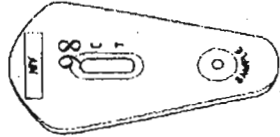
## Quick Steps

## Interpretation of

### First

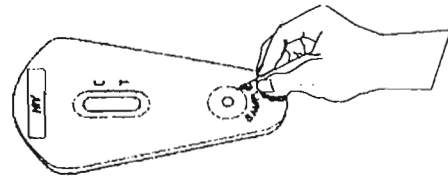
Remove the test device from the pouch prior to performing the assay.  
Label the device with patient identification.

This is what the cassette should look like.



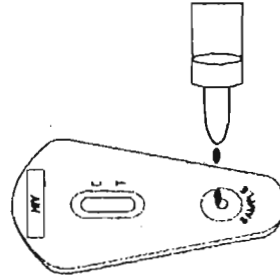
### Second

Using the pipette, add two drops of sample to the sample port.



### Third

Add two drops of the wash reagent to the sample port also.



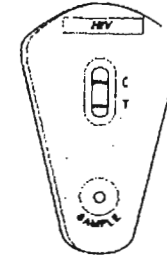
### Fourth

Now allow ten minutes to elapse for the results to appear.



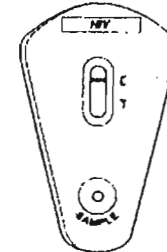
### Notes:

1. This test must be used for screening only.
2. All inconclusive results should be re-tested.
3. Any positive result must be re-tested with an ELISA or confirmed with a Western Blot method.



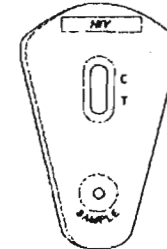
### Positive -

This is marked by the presence of two lines, a control and a test line.



### Negative -

This is marked by the presence of only one line, a control line.



### Inconclusive -

This is marked by the presence of no lines, either control or test.

## Appendix 5

### Counselling questionnaire

Name of Health Facility: \_\_\_\_\_ Patient Code:( stick on bar code if available) \_\_\_\_\_

Age of patient : \_\_\_\_\_ years or DOB \_\_\_\_\_

Sex: M — F —

What standard did the client reach at school/ college? \_\_\_\_\_

Has the client got an income?\_ give details. \_\_\_\_\_

Number of children \_\_\_\_\_

#### WHY HAS THE CLIENT COME FOR COUNSELLING TODAY?

A) Did nurse or doctor recommend counselling ( Fill out table 1)

OR

B) Did the patient ask (Fill out table 2)

**TABLE ONE: - For patients referred by doctor or nurse. Why was counselling requested?.**

|                                     |  |
|-------------------------------------|--|
| Tuberculosis (TB)                   |  |
| Sexually Transmitted Diseases (STD) |  |
| Antenatal clinic attender           |  |
| Other (please specify)              |  |

**TABLE TWO:- Client asked for test ( self referred) Why did the patient request test?**

(GIVE ONE MAIN REASON)

|   |  |
|---|--|
| Client is ill   |  |
| Partner is ill or died  |  |
| Baby is ill or died   |  |
| Concerned about partner's risk activities                                 |  |
| Concerned about own risk activities                                       |  |
| Rape  |  |
| Sex worker  |  |
| Getting married   |  |
| Pregnant  |  |
| Pre-employment  |  |
| Insurance   |  |
| Interested because of health education or awareness campaigns             |  |
| Interested in receiving TB preventive therapy /co trimoxazole prophylaxis |  |
| Other( please specify)  |  |

If you counselled the patient and he/ she refused testing please complete table 3.

TABLE 3. Why did the client refuse testing.

|   |  |
|---|--|
| Worried that others will find out their HIV status (lack of confidentiality)  |  |
| Worried about reaction of partner if HIV- positive  |  |
| Worried about losing job if HIV-positive  |  |
| Worried about losing insurance coverage if HIV-positive   |  |
| Worried that there will be no benefit from knowing HIV status because of belief that nothing can be done to HIV - positive people |  |
| Worried that knowledge of being HIV-positive might hasten illness and death   |  |
| Worried about attitude of health care workers if HIV-positive   |  |
| Other (please specify)  |  |

Name of Counsellor: \_\_\_\_\_

Designation of counsellor eg doctor/ nurse/ NGO / Hospice / other (\_\_\_\_\_)

Date of Counselling: \_\_\_\_\_

Date sample collected for testing:        /        /

Date test result available at facility:        /        /

Result of test

|          |  |
|----------|--|
| Positive |  |
| Negative |  |

Other:

Date result given to client:        /        /

IF THE TEST IS POSITIVE

Client must see doctor or nurse to fill out  
out form three .

Dr Campbell will collect these forms every month.



## Appendix 6

### Questionnaire for baseline assessment of need for lay counsellors and rapid HIV tests.

Dear Sister -----,

UGU South has been selected by the South African Department of Health to participate in research into ways of linking TB and HIV health programmes. As part of this research a task team has been developed, (Regional HIV coordinator and facility supervisors). This task team wishes to ascertain the opinions of nurses on the Voluntary Counselling and Testing programme in UGU. The use of non-trained health people has been suggested for counselling for HIV testing (lay counsellors). These lay counsellors would not be able to carry out the actual testing. It is proposed to introduce rapid HIV tests at health facilities. These tests are carried out on a finger prick of blood and the result should be available within fifteen minutes. In particular, your opinion on the use of lay counsellors for pre and post test counselling and on rapid HIV tests would be appreciated. I would be grateful if you could complete this questionnaire and return it to me in the envelop attached. Please do not put your name on the form.

Where are you based? (please put x beside right answer):

Hospital

Clinic

Do you think lay counsellors would be useful at your health facility?. Please give reasons for your answer.

Do you think rapid HIV tests would be useful at your facility?. Please give reasons for your answer.

Thank you for completing this questionnaire. ~~BB~~ Campbell, South Coast Hospice.