

**Approaches to the successful scale up of HIV
voluntary counselling and testing services in Kenya
2001 - 2005**

Thesis submitted in accordance with the requirements of the University of Liverpool
for the degree of Doctor of Philosophy by Dr Miriam Taegtmeier

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For Ruth and Hannah Mara

Abstract

Provision and utilization of voluntary counselling and HIV testing (VCT) services in Kenya expanded rapidly between 2000 and mid 2005, with an overall increase in sites from 3 to 585, and an increase in persons served from 1000 to over 550,000, a rate of scale up that is unparalleled in the developing world. This thesis uses multi-method (quantitative and qualitative data) operational research to describe how responsive, locally-developed service models gave impetus and quality to a national programme.

The establishment of national systems for site registration as part of the study itself allowed for central regulation of scale up. Site registration data presented reflect the rapidly increasing VCT coverage in Kenya and indicate that remote areas remained underserved or only had services late. While more strategic thinking at national level (reflecting HIV prevalence rates and need) occurred after 2003, many early decisions on VCT scale up in Kenya were donor-driven and often duplicative.

In order to describe the *progress* of voluntary counselling and testing service provision, utilization and access, detailed quantitative data from 124,362 VCT clients representing 55 VCT sites in 20 districts in Kenya are presented. Statistical analysis of these data indicate a rapid increase in the number of new sites opened quarter by quarter, an increase in the trend of young people of both sexes accessing VCT services, but a decline in the trend for women to access VCT. The impact of the mass media campaigns is analysed using a multivariate Poisson regression model that reveals a significant impact of campaigns that directly mention HIV or HIV testing when compared to those that merely use a 'positive lifestyles' approach.

The qualitative analysis of in-depth interviews conducted with policy makers and VCT stakeholders in Kenya provides additional insights into the *process* of scale up in Kenya. Key elements contributing to the scale up of counselling and testing were supportive policies, innovative practices responsive to clients' needs, mass media promotion and systems to promote quality assurance. The innovative use of personnel and the active engagement of the client in the process of test result interpretation have contributed to the success of scale up.

Finally a case study of a local NGO (Liverpool VCT, Kenya) summarises multi-faceted support to national scale up through the development of a systematic approach to site opening, the use of operational research to inform practice and a national emphasis on the role of quality assurance in scale up. In response to equity concerns about scale up, it describes the use of equity analysis in the development of responsive services and programmes that actively promote equity.

Access to testing is a vital preliminary step to ensuring access to antiretroviral treatment. Applying these lessons learnt will assist policy makers to translate successful practice in counselling and testing into the scale up of HIV prevention services and AIDS treatment.

Declaration

This thesis has been written exclusively by the PhD candidate, Miriam Taegtmeyer.

At no previous time was this work submitted for a degree.

All quotations have been distinguished by quotation marks and sources of information acknowledged.

Miriam Taegtmeyer

Date 21.9.07

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Acronyms

ACU	AIDS Control Unit
AIDS	Acquired Immunodeficiency Syndrome
AKMLSO	Association of Kenyan Medical Laboratory Scientific Officers
AMREF	African Medical and Research Foundation
ARV	Antiretrovirals
ART	Antiretroviral therapy
CBO	Community Based Organization
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval
DARE	Decentralised AIDS and Reproductive Health
DASCO	District AIDS and STI Coordinator
DHMT	District Health Management Team
DHS	Demographic and Health Survey
DfID	Department for International Development, UK
DMOH	District Medical Officer of Health
DMS	Director of Medical Services
DSRS	Department of Standards and Regulatory Services
FBO	Faith-based organization
GoK	Government of Kenya
HIV	Human Immunodeficiency virus
IEC	Information, Education and Communication
IMF	International Monetary Fund
ITN	Insecticide-treated bed nets
JAPR	Joint AIDS Programme Review
JSI	John Snow Inc. Partnership for Supply Chain Management
KEMSA	Kenya Medical Supplies Agency
KII	Key Informant Interview
KMLTTB	The Kenya Medical Laboratory Technicians and Technologists Board
LVCT	Liverpool VCT, Treatment and Care
MoH	Ministry of Health
MOU	Memorandum of Understanding
MSM	Men who have sex with men
NACC	National AIDS Control Council
NASCOP	National AIDS and STD Control Programme
NGO	Non-Governmental Organization
NQAT	National Quality Assurance Team
OR	Odds Ratio
PEPFAR	President's Emergency Plan for AIDS Relief
PR	Prevalence Ratio
QA	Quality Assurance
STIs	Sexually Transmitted Infections
TA	Technical Assistance
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

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Chapter 1

Introduction

1.1 Background

1.1.1 In the year 2000 Kenya was a country with high HIV/AIDS prevalence and low knowledge of HIV status

In the year 2000, when this study commenced, the HIV prevalence in Kenya was estimated at 13.5% with approximately 2.2 million Kenyans thought to be living with HIV/AIDS¹. At the same time, the Demographic Health Survey found that despite declared intention to test, only an estimated 14% of the adult population had had an HIV test in any context². HIV testing at the onset of the study was largely conducted in hospital laboratories and without access to pre or post-test counselling³. Written certificates were issued to clients who paid for testing as a laboratory service.

Treatments for HIV were limited to the early recognition and treatment of opportunistic infections, with only a handful of wealthy Kenyans in Nairobi able to access antiretroviral therapy through private physicians⁴. Since the Government of Kenya (GoK), under the leadership of President Daniel Arap Moi, declared HIV/AIDS a national disaster in 1999, rapid progress has been made in both policy and practice. However, health systems in Kenya continue to be under significant strain, exacerbated by the increasing burden of HIV disease.

1.1.2 Voluntary counselling and testing was a key government response to HIV

Voluntary counselling and testing for HIV (VCT) is a behaviour change intervention aimed at the asymptomatic adult wanting to know their HIV status. In Kenya trained counsellors perform counselling and same-hour HIV testing. Knowledge of the HIV results combined in one session with professionally guided risk-reduction planning has been shown to be effective in reducing the reported number of sexual partners, sexually transmitted infections and increasing condom use⁵. Previous pilot projects

and formative research conducted in Kenya had demonstrated that this model was effective in reducing HIV risk behaviour⁵ in addition to being both acceptable to Kenyans and feasible to implement in a public health setting^{6,7}. Three centres offering quality assured VCT were in existence in Kenya in the year 2000. All were located in government primary health care centres and were supported by donor funding. They formed the basis of a VCT pilot project⁸.

Based on experiences in Kenya and neighbouring countries, the Government of Kenya made a unique commitment to the rapid scale up of sites for HIV counselling and testing within public health facilities⁹. These are called ‘voluntary counselling and testing’ centres or VCT sites. The proposal of the government in 2000 was to open 350 public sector VCT sites by the end of 2004 - 5 sites in each of the 70 districts in Kenya. The first steps were made in September 2000 with the establishment of the Kenya national VCT taskforce. This taskforce drew up the Kenya National VCT Guidelines¹⁰, a national data collection form and a basic three-week training course¹¹ within the space of one year. A mass media campaign, supported by donors and the Kenyan Government was planned to promote the concept of VCT to the public and a World Bank loan through the Decentralised AIDS and Reproductive Health (DARE) project¹² was earmarked by the Ministry of Health to secure test kits, provide training and to support the supervision of sites.

1.1.3 Guiding principles that shaped the process of VCT scale up

During the early stages of scale up, guiding principles were voiced by government, donors and other stakeholders. Some are reflected in national policy documents, some in guidelines, some in donors’ statements and others were based in the value systems

of individuals. As the national taskforce represented a wide variety of stakeholders (details of which may be found in section 3.5.2) with common, as well as conflicting, views, they are presented below only in outline and discussed in more detail in the methods, results and discussion sections of the thesis.

Policy documents state that VCT services should be *private and confidential*. The national guidelines support the use of anonymous client codes for VCT with no written results being issued, but also make provision for shared confidentiality in the case of people testing positive who wish to be referred to HIV care services¹⁰.

The original statement of government to open 5 sites in each of 70 districts reflects the principle of *equity of access* and is focussed on geographical access. It promotes equal service provision in remote and rural areas. Access also needs to be *pro-poor, affordable and convenient*. Statements in the national VCT guidelines on opening hours, cost of services and the need to make services youth and couple-friendly show a commitment to increased access within *vulnerable groups*. There is recognition that *gender* inequities drive the HIV epidemic globally and the Office of the President issued its support for mainstreaming gender into the Kenya National AIDS Strategic Plan¹³. An entire appendix of the national VCT guidelines is devoted to human rights and VCT¹⁰.

1.1.4 The establishment of the Liverpool VCT Centre

The Liverpool School of Tropical Medicine conducted a pilot project in 1999, assessing the feasibility and acceptability of integrating VCT services into three primary health care centres^{6;8;14}. The success of this pilot led to donor support and to

the first phase of VCT scale up in Kenya being conducted by the expanded 'Liverpool VCT Project'. At the time it commenced there were thirteen staff on short-term 'research' contracts: three VCT sites integrated in government health facilities each of which had an additional VCT counsellor, a peer educator (to mobilise communities to come to the new service) and a nursing officer employed by the project and supplementing the government staff already working in the facility. There was also a project manager, staff for data entry, administrative support and a driver. This scale up was documented by me (as principal investigator) between 2001 and mid 2005 and forms the basis of the data presented in this thesis.

The subsequent establishment in May 2002 of a local Kenyan non-governmental organization (NGO) named Liverpool VCT, Treatment & Care Kenya (LVCT) grew out of this operational research project. New premises were rented in a residential area of Nairobi, new staff hired to meet the expanding needs of new projects (such as the new districts requiring support) and to staff the newly opened stand alone sites. Rapid organizational growth soon saw the NGO outstrip its early employment structures and financial systems, all of which have been radically developed in response. Currently LVCT is managed by departmental managers in HIV services, training, research, finance and admin and quality control¹⁵. The HIV services department is the largest and a number of the heads of department within this are responsible for large programmes in themselves. This includes ART programmes, counselling and testing services, the mobile programme, a programme for the Deaf and a programme for men who have sex with men).

With over 200 staff LVCT is now the largest single provider of VCT stand-alone sites and technical assistance to the GoK. Its mission is to enable the provision of quality VCT and HIV care services in Kenya and beyond¹⁵. LVCT continues to work in collaboration with government in policy formulation on HIV testing and care. It also continues to work with District Health Management Teams to provide technical support to site establishment. The central role of LVCT in the development of policy; my representation on the national taskforces and involvement in writing of national guidelines, training manuals, data forms and media campaigns mean that the thesis requires reflection and insight in teasing out the order of events and the significance of individual actions or decisions. A more extended discussion of this interplay and its contribution to the credibility and interpretation of the data is undertaken in the methodology (section 4.3.1) and explored further in the results and discussion chapters. As the study is rooted in an NGO it also forms a case study (chapter 7) whose scale up mirrored and drove the national scale up of VCT in Kenya.

1.2 Justification for the study

1.2.1 Why is research into the scale up process needed?

The rapid global spread of HIV and the fact that the pandemic has not yet peaked means there is a strong moral imperative to scale up the response to HIV/AIDS¹⁶. International efforts, focusing on increased access to treatment for HIV¹⁷, assume the presence on the ground of sound prevention and testing programmes, yet these are often insufficient, of poor quality or absent altogether. Overburdened health systems in resource-poor countries are unable to cope with either the impact of HIV or the scaled-up responses to treatment that are proposed¹⁸. There is an urgent need for both robust, replicable approaches that meet this demand for quality-assured HIV testing

services, and for responsive, locally-developed models that translate good practice into the scale up of HIV treatment in resource-poor contexts. Lessons learnt from the literature blended with the multi-method research used in this thesis to document VCT scale up in the specific Kenyan context should have a wider resonance. Such lessons are applicable to the global efforts in HIV prevention and in increasing the access to antiretroviral therapy and HIV care.

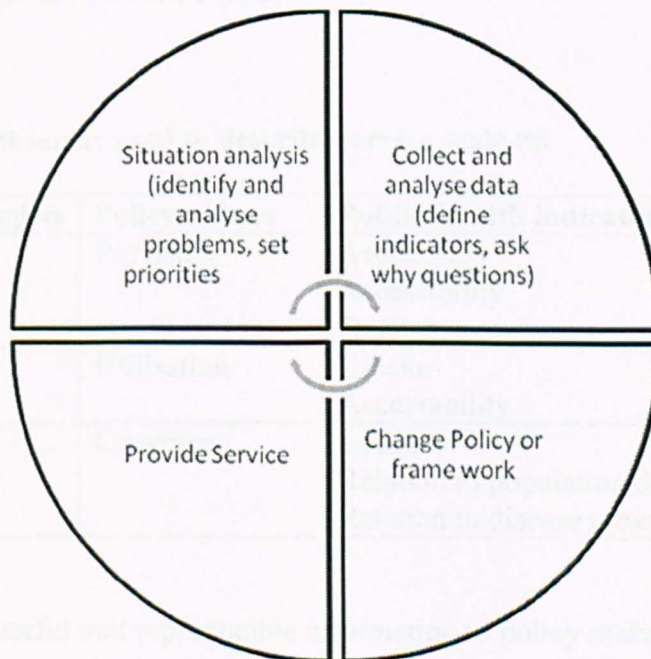
1.2.2 Why, when and how to scale up: the role of operational research

Operational research is the umbrella that frames the methods (chapter 4) of this thesis. It is a scientific approach to analysing systems and was first applied in the military and in industry¹⁹ and more recently it has been used in the analysis of health systems and the delivery of new health technologies. Its goal is to derive an understanding of the operations of a complete system including equipment, people, and environmental conditions and then improve upon it. It is this emphasis on seeing how things actually operate in the real-world and applying a scientific approach to improving performance that has proved useful in the scale up of HIV/AIDS interventions²⁰ and health systems in developing countries²¹. It observes and documents the translating of laboratory-based or other ‘scientific’ discoveries into real life practice in the field, where social, cultural and political factors interact. Careful and appropriate documentation of processes is a key component in identifying what works and what doesn’t work in a particular service. Operational research may be conducted by external observers or by internal participants. The latter is the case in this thesis and the strengths and weaknesses of the reflexivity embedded in this approach are addressed further in the methods (section 4.3.1) and the discussion (section 8.4). Operational research is thus

rooted in context and new cycles of operational research may be required when extrapolating lessons learnt to new situations.

Common elements of operational research studies are: data collection, direct observation of operations, development of a replicable model, recommendations for improvements and feedback on the impact of the changes. These can then be used to inform policy in a locally developed yet structured manner shown in figure 1 below. The figure represents graphically the interconnected nature of operational research where quantitative data collection and analysis are complemented by qualitative exploration and analysis in a feedback cycle that improves the delivery of the services and influences policy development.

Figure 1: Operational Research model



Operational research can be applied to the scale up of HIV testing services in resource-poor settings. The development of same-hour HIV tests that did not require refrigeration or expensive equipment in order to provide rapid quality-assured results was ideal for the scale up of a new, much needed service in high prevalence countries. The promise of increased access to HIV treatment gave another impetus to extending testing services as widely as possible. However, useful details of how voluntary counselling and testing services were initiated and maintained in different contexts were limited and little had been documented about the feasibility and acceptability of VCT services in the very settings they were intended to benefit.

In this thesis ‘service provision’ is taken to refer to availability, accessibility and quality and ‘service utilisation’ to the acceptability and uptake in the community and ‘coverage’ to the location of the sites in relation to the population. A summary of equivalent terms is given in table 1 below.

.Table 1: Equivalent terms used to describe service scale up

Epidemiologists	Polymakers	Public Health indicators
Time	Provision	Availability Accessibility Quality
Person	Utilisation	Uptake Acceptability
Place	Coverage	Location Relation to population density Relation to disease prevalence

In order to provide useful and reproducible information to policy makers, the design²² of the operational research conducted in this thesis combines exploratory qualitative research with policy makers together with a quantitative data analysis of service provision, utilisation and coverage.

The complementarity of qualitative and quantitative methods

Combining quantitative and qualitative research methods is a common approach in operational research^{23;24}. The methods and data used in this thesis follow from, and fit with the questions asked. For example, quantitative methods are required to answer questions such as ‘how many sites of what type and in what location are there?’ and ‘who is accessing services?’ Qualitative methods, on the other hand, are required to enable a better understanding of the perceptions and experiences of policy makers and stakeholders. Both methods are useful in analysing the process and progress of scale up and a flexible approach allows for the choice of the most appropriate methodology to be shaped by the subject focus. Mixed research methods also lead to service development as the results inform each other a virtuous cycle of feedback culminating in programmatic change²⁵.

1.3 Thesis outline

1.3.1 Aims

The two main aims were to:

1. Evaluate and describe the scale up of HIV testing services in Kenya using operational research methods.
2. Explore the potential for a replicable model applicable to other HIV services and settings.

1.3.2 Objectives

The research had four objectives:

1. To document VCT scale up in Kenya from April 2001 to June 2005 and conduct a quantitative analysis of client flow and characteristics, access patterns of VCT site use and the impact of the mass media campaign.
2. To understand the process of VCT scale up from a stakeholder perspective and assess the influence of key stakeholders in Kenya on national policy formulation.
3. To make recommendation for a future scale up of VCT services.
4. To draw out lessons from VCT scale up applicable to the scale up of other HIV services in resource-poor settings.

1.3.3 Overall outline of the thesis

Chapter 1: The **Introduction** provides an introduction to the thesis including context, the need for the study and overviews the study aims, objectives and methods.

Chapter 2: The **Literature Review** places the expansion of VCT services in Kenya in the context of ‘scale up’ in the development literature. It examines approaches to scale up by various stakeholders and their relevance to HIV/AIDS and to VCT. It considers the evidence that HIV/AIDS needs a specific response and the effect that stakeholders such as governments, donors and non-governmental organizations can have on this. It looks critically at the evidence-base for VCT and outlines models of VCT service provision assessing their suitability for scale up.

Chapter 3: The **Kenya Background and Context** outlines the specific Kenyan context with consideration to the HIV/AIDS epidemic and the progress of prevention and treatment responses. Material in chapter 3 is necessary background to understanding VCT scale up. The details of the ‘story’ of VCT scale up are explored in chapters 5-7.

Chapter 4: The **Methodology** presents and explains the multi-method research methodology for this thesis, separating the quantitative and qualitative study aspects. Statistical methods are outlined. The qualitative methodologies are described in detail to enable the reader to ascertain the trustworthiness of the data presented and a more extended discussion of participant observation and insider/outsider issues is undertaken, exploring what my role means for the validity and interpretation of the data. The contribution that can be made by case studies is outlined. As a mixed method narrative approach is used the first, rather than the third, person is used throughout this thesis, in particular when reflexive approaches are used that require self-reference.

Chapter 5: **Key Quantitative Results** from the site registration and VCT uptake data are summarised in figures, tables and text.

Chapter 6: **Qualitative Results** link emerging themes directly to these quantitative findings and are illustrated with quotations. In line with the stated objectives, the results are presented with a particular focus on VCT policy and practice.

Chapter 7: **A Case Study** of LVCT's quality assured scale up is used to illustrate and reflect on the contribution made to VCT scale up in Kenya by comprehensive quality assurance systems and the use of operational research to inform practice. Supportive materials are included in the appendices.

Chapter 8: The **Discussion** situates the documentation of VCT scale up in the context of the literature synthesised in chapter 2. It asks what the Kenyan story adds to the international debate and interprets the findings in a practical manner – giving my own opinion on the implications of the findings.

Chapter 9: Final **Conclusions and Recommendations** are presented, including a replicable model that could be used as a blue-print for other countries wishing to achieve similar outcomes of scale up.

Chapter 2

Literature Review

This chapter explores the meaning and methods of scale up. In order to better understand the process of VCT scale up from a stakeholder perspective and assess the influence of key stakeholders in Kenya on national policy formulation, the literature on the approaches to scale up used by stakeholders is reviewed (section 2.2) with a focus on government, NGOs and donors as key players. The experience of previous scale up initiatives in resource-poor settings make it possible to then draw out the elements necessary for successful national scale up and these are outlined in a logical and coherent order.

Throughout the literature review, key elements from the published literature are presented in a manner that can be linked to the emerging themes in the results and then revisited in the discussion section. This allows the strengths and weaknesses of the Kenyan VCT scale up to be evaluated against what is already known about scale up in other similar contexts.

The new challenges to health systems posed by HIV are examined (section 2.5.3) in order to make realistic and practical recommendations for future scale up of VCT and other HIV services in resource-poor settings.

The literature about voluntary testing for HIV has been assessed critically (section 2.6) to draw out lessons from VCT scale up applicable to the scale up of other HIV services in resource-poor settings. The suitability of different VCT models for scale up is examined and evaluated on the basis of published experiences from Kenya and elsewhere. The evidence-base for VCT is examined, allowing consideration of VCT's

limitations and strengths and how these might be exacerbated or built upon in scale up.

As well as books and journals from libraries and recommendations, the National Institutes of Health search engine PubMed was used (last date searched 31.8.2007). Studies published after the beginning of VCT scale up in Kenya, in 2001, are included as they contributed to programme modifications. Key phrases employed were: '*HIV/AIDS*', '*Voluntary Counselling and Testing*', '*HIV testing*', '*scale up of antiretrovirals*', '*scale up*' and '*lessons learnt*'. Additional materials and 'grey literature' were available from libraries, conference abstracts, NGO and donor reports, the WHO and the Joint United Nations Program on HIV/AIDS (UNAIDS) as well as country specific documents from government offices. All are referenced accordingly.

2.1 What is scale up?

Scale up has been used as an umbrella term to describe a number of differing methodologies to expand or widen the impact of activities or services. There is no common understanding of scale up, making comparison difficult. The term is used loosely by government, by non-governmental organizations, by donors and by other stakeholders to mean different things. For example, governments will often talk of scale up to mean a wider geographical focus and the inclusion of remote and hard-to-reach areas. They may express scale up in terms of political districts, constituencies or number of voters with access to HIV testing services²⁶. A donor or a health economist may focus on the number of clients reached, regardless of where they live or which target group they are in: for example scaling up the absolute numbers of people having an HIV test²⁷ (even if all are youth in the capital city). On the other hand an

NGO may talk of scale up as improving access to services through attempting to address the specific barriers that their potential clients face¹⁶. All represent a scale up of activities but have differing implications in terms of personnel, resources, strategies and methodologies. All focus on expansion of quantity with improvements in service quality rarely being termed ‘scale up’.

The term scale up can also be used to capture the incorporation of new, but related, activities in the remit of an organization: also termed vertical expansion²⁸. In other words, an organization that conducted only training for HIV testing may start to do trainings for antiretroviral adherence counselling. A VCT site may offer services such as screening for sexually transmitted infections (STIs) or family planning alongside HIV testing services in its centres. Organizations may also choose to expand into entirely new areas as a result of a need expressed by their target group: also termed horizontal expansion²⁸. Examples of this would be a post-test club starting income generating activities or an organization that empowers girls reaching out to provide sexual and reproductive health services.

De Jong in *Making an Impact in HIV and AIDS* outlines various definitions of scale up used in the development literature as presented in table 2 below¹⁶.

Table 2: Definitions of scaling up used in the development literature

<i>Input</i>	<i>Output</i>
Expanding organizational size	Reaching more people
Increasing scale of activity	Expanding geographical areas reached
Integrating other activities	Reaching other ‘target groups’
• Horizontal expansion	Increased volume of output
• Vertical expansion	Increased depth but same area

This thesis describes both scale up ‘outputs’, such as geographical coverage and VCT client uptake, and aspects of scale up ‘inputs’ such as how the scale of activity was increased through partner and stakeholder collaborations.

2.2 Strategies for scale up

2.2.1 Government strategies for national scale up

There is a moral and political imperative for governments to tackle highly visible diseases affecting communities and to do so rapidly, whilst achieving broad coverage. Successful government strategies to scale up therefore tend to have the ‘top-down’ approach in common²⁹. Decisions are made centrally, often on the basis of disease prevalence, and changes are instituted at primary health care centres through a hierarchical cascade of national, provincial and district level decision-makers. Ministry of health staff thus reach remote and donor-neglected areas alike. Government is in a unique position of being able to consider rapid action, priority setting and sustainability³⁰.

Since the popularisation of the concept of primary health care in 1978 by the World Health Organisation (WHO) and United Nations Children’s Fund (UNICEF) health planners have pursued national policies of primary health care³¹. There is much discussion in the literature on the government-led roll-out of national programmes through its primary health care systems³². In the early eighties the idea that the integrated primary health care approach was unrealistic³³ was taken up by a number of governments and donors who wanted to target scarce resources to the control of the specific diseases that accounted for the highest morbidity and mortality. Thus vertical programmes for the control of TB, STIs, malaria and childhood immunisations gained

in popularity with a knock on effect on the longer-term and wider-reaching integrated programmes. Subsequently there has been much debate on the risks and benefits of vertical and integrated programmes in primary care^{29;34}; their resource implications and public health impact.

In reality many governments are now working with a middle way in which specific vertical programmes are integrated in primary health care, are more sustainable and are able to influence long-term improvements in health. An example of this be might the way family planning programmes in many countries have shifted from vertical programmes co-located in health centres but functioning independently from them, to being located in health centres with trained and salaried government staff providing the service³⁵.

2.2.2 NGO strategies for scale up

NGO scale up on the other hand tends to be ‘bottom-up’, more firmly rooted in the community context and to start small²⁸. The first step in scale up for most NGOs is *additive*; increasing the impact of the work by direct expansion - for example by employing more staff or opening more sites. Following on from this, NGOs have adopted a number of different and overlapping tactics to broaden their impact through a *multiplier* effect. For example an NGO may lead through good example such that its ideas, methodologies and models of service provision are adopted by other organizations, including government³⁶. In this way they are indirectly broadening their impact through a kind of diffusion. In some cases, the NGO may choose to work by more deliberately influencing other organizations, including the government, to take up models of service provision that have been developed by them (catalysing

them). Others focus on influencing government policy through feeding back lessons learnt from pilot sites and operational research^{37;38} into documents and guidelines or advocating for mainstreaming in policy documents (an example of this would be gender mainstreaming). The strategies for successful NGO scale up are discussed in the development literature as if they were deliberate, distinctive choices, carefully thought through by NGOs and their donors. In reality, NGO scale up may employ one or all of these strategies in an unplanned, reactive or donor-driven manner¹⁶.

This thesis describes operational research conducted by a Kenyan NGO, Liverpool VCT, whose focus is on HIV services and whose contribution to the national scale up of VCT in Kenya employed a variety of conscious and unconscious strategies, discussed in more detail in a case study detailed in chapter 7. The study is rooted in an NGO that was itself taking shape as the study progressed. Therefore the specific context of an organization that is going through a parallel expansion phase to that described nationally needs to be borne in mind when interpreting the results and recommendations.

2.2.3 Donor strategies for scale up

Donor strategies for scale up are more often issue-related and driven by the need for target numbers to be achieved, proposals adhered to and indicators met. In VCT scale up this has the potential to lead to a focus on the number of clients seen rather than the quality of the interactions or the development of protocols, policies and personnel.

As a result of the need to report both financially and against indicators, many donors favour working with developing countries indirectly through a third party or

'implementing partner'. These are often international charities, with their headquarters in the donor nation that understand the reporting requirements and proposal writing systems of the donor nation. Most operate simultaneously in a number of resource-poor countries through a large network supported from the home country by policies, protocols and guidelines adaptable to each specific setting. Examples of such implementing partners are Family Health International (FHI), Futures Group Europe, Population Services International (PSI) and others. Not all donors work through such implementing partners and in any one country differing complementary (but also conflicting) approaches may be used. Donor approaches change over time depending on the political climate in the donor nation. Thus under one regime, direct aid to NGOs or smaller organizations may be favoured, while under the next a sector-wide approach may be the norm, as has been the case with the United Kingdom's Department for International Development (DfID) in Kenya over the last decade^{39;40}.

Donor nations, with their changing political climates, have a disproportionate influence on international and national trends in aid⁴¹. This is currently the case with the United States. The anti-abortion and pro-abstinence stance of the Republican regime has resulted in a policy that denies funding to any organization that uses its own money to provide abortions or engage in abortion counselling or referral. A certain proportion of HIV/AIDS funds are earmarked specifically for abstinence programmes with scant evidence base for efficacy⁴² and for faith-based AIDS prevention work²⁷. VCT sites are therefore encouraged in churches, mosques and faith-based organizations (FBOs) that do not allow the distribution, or in some cases even demonstration, of condoms as part of risk reduction counselling.

The issue of syndromic management (where STIs are diagnosed and treated based on a collection of signs and symptoms rather laboratory-based evidence) is an example of how donor-decision making can influence international political contexts. After the development of WHO policy on syndromic management and publication of the results of a study conducted in Mwanza Tanzania indicating a decrease in HIV incidence in areas practicing syndromic management⁴³, many donors fell into line. Syndromic management of STIs became a key focus of many donors in their reproductive health funding. However, local conditions and contexts, including HIV prevalence rates, vary. The replicability of the Mwanza findings in every setting are in some doubt but donors continue to pressure national governments to adopt internationally sanctioned policies even when these may be inappropriate to the particular context^{41;44}.

2.3 What contributes to successful national scale up?

A number of lessons from the successful scale up of other health services in resource-poor countries are relevant to the rapid addition of new VCT sites. These are presented in no particular order of importance as they inform each other and overlap. For example operational research (section 2.3.4) on accurate costings (section 2.3.5) might inform the need for improved logistics or for better evaluation programmes (sections 2.3.2 and 2.3.3). These interplays and overlaps are discussed further in the discussion (chapter 8).

2.3.1 Strategic partnerships and alliances

There is relatively little literature on the symbiotic nature of the relationship between government, donors and NGOs necessary for sustainable scale up in countries where there may be weak capacity and political or economic instability. In these cases the

strategic partnerships and alliances may play a more important role than any individual organization or the government itself. The critical role of government leadership in these alliances should not be underestimated^{45;46}. In countries, such as Thailand^{47;48} and Uganda⁴⁹, where leadership on HIV/AIDS is strong, NGOs working to influence policy and mainstreaming will realize a greater impact⁵⁰⁻⁵². On the other hand in countries that are at war such as Southern Sudan, or where leadership in HIV/AIDS is weak, NGOs are more likely to ally with donors and other stakeholders^{53;54} and try to widen their impact through influencing each other. Government responses to disease tend to correlate with prevalence rates and to therefore to be weak in countries with low prevalence rates, causing many partners to choose to work independently of the formal sector in order to increase impact.

2.3.2 Planning for logistics

Successful national programmes require sound procurement, supplies and appropriate delivery. A full discussion of this key area is beyond the scope of this literature review. Much has been learnt both from the successes demonstrated in the EPI systems, with cold chain deliveries⁵⁵ and the challenges in other vertical programmes such as the WHO's syndromic management programmes for STIs and TB control programmes. Both at varying times have come to a virtual standstill in government health facilities with the only drug supplies available being in mission hospitals or private facilities with their own parallel procurement systems⁵⁶. While some countries subcontract issues of supplies and logistics for vertical programmes to specialist NGOs⁵⁷, national coordination remains important. A national body can assist registration of sites; prevent theft (or 'leakage') from government facilities and liaise with service providers.

2.3.3 Planning for evaluation

Evaluation research should be a fundamental component of programme scale up⁵⁸. National evaluation designs are best if sorted out early and clearly. Not only is this important as an operational research tool in successful scale up, but it provides vital feedback to programme designers and policy-makers on service utilization. The role of monitoring and evaluation should be clearly related to the type of scale up. Experience from VCT scale up in other countries, including Uganda⁵⁹, has shown that complex and donor-driven data collection may serve to hamper rather than enhance programmes and the progress of scale up.

The way indicators are set can affect scale up in themselves⁶⁰. Are they gender sensitive^{60;61}, do they take access into account⁶²? Do they focus on geographical coverage and numbers tested to the detriment of vulnerable and at-risk populations? In an ideal evaluation scale up indicators of provision, coverage and impact would be evaluated according to adequacy, plausibility and probability²² as outlined below.

1. Adequacy studies ask: did the expected changes occur? Results are expressed as indicators e.g. VCT sites opened, clients seen, staff trained.
2. Plausibility studies ask: did the programme have an effect above and beyond other external influences? They require a control group (often using historical or internal controls). Plausibility becomes higher stepwise if
 - a. HIV incidence fell in areas with VCT intervention;
 - b. HIV incidence did not fall in areas without VCT;
 - c. there was an inverse association between the intensity of the intervention and the decline in incidence;

- d. HIV negative individuals who had been for VCT had a lower incidence of HIV than HIV negative individuals who had not been for VCT and
- e. HIV incidence in people who do not attend VCT was similar to that in the control area.

3. Probability: asks the same question as plausibility designs but subjects the programme to randomised controlled trials.

In reality, idealistic programme evaluation is rarely feasible. If the intervention has previous proven efficacy in field trials, few experienced decision makers would require the effectiveness of programmes to be measured through probability designs, which are difficult to set up, have political implications (how do you chose your control districts or regions?) and are unable to look at delayed effects over time. Plausibility appraisals are often considered impractical by policy makers (and their donors) and it is difficult to be certain that all possible confounders are accounted for. In reality therefore most scale up evaluations report adequacy indicators alone since the indicators form the basis of donor reporting and are generally sufficient to ensure on-going funds.

2.3.4 Links to operational research

Following initial national decisions, the success of any roll-out of services is dependent on knowing why, when and how to scale up. This differs from evaluation as in addition to indicators and programme efficacy outcomes, the feasibility and acceptability of the service are carefully documented, continuously modified during the programme and firmly rooted in the practicalities of the local context.

Lessons learnt from the roll-out of immunisation programmes⁶³ show that the successful provision and utilisation of services depends on the feedback provided by operational research^{64,65}. Evidence on the feasibility and acceptability of a new intervention is key⁶⁶. The natural cycles of acceptance of a new service need to be understood with some people coming forward soon after the service opens and the majority, including the opinion leaders, waiting to see what the impact or effect might be. Based on rural sociology in the USA⁶⁷, public health theory divides people into five categories⁶⁸: innovators, early adopters, early majority, late majority and laggards. As these categories imply, each group has specific personalities related to adopting innovations that can be identified and used to implement new policies and procedures. By encouraging uptake amongst innovators and early adopters it is possible to gain critical mass through the early majority, who also act as opinion leaders and thereby accelerate national scale up⁶⁹⁻⁷¹.

Unfortunately decisions to go to scale are too often based on high prevalence rates, political ambition and evidence from randomised controlled trials without enough weight being put on operational research. For example there is good evidence for the efficacy of insecticide treated bed nets (ITNs) in reducing childhood malaria deaths in endemic areas, yet uptake of this simple, cheap and effective intervention is far from universal or without problems^{72,73}. Further operational research combining the understanding of behaviour change with costings, understanding of how health systems and donor organizations function and locally responsive service delivery that is accessible to all groups is required. HIV, with its complex social and cultural resonances as well as its virological complexity can only prove more challenging. Currently there is no cure and available antiretroviral treatments are limited in scope

and the long-term public health benefits are yet to be realized. It is imperative then that the national scale up of HIV services takes into account findings from operational research at the early stages of policy development.

2.3.5 Accurate costing

Costing studies and cost effectiveness of interventions are key to the decision-making process for governments, donors and NGOs supporting national programmes. This is never more so than in resource-poor settings where health expenditure per capita is limited and health systems are already overburdened. Any new intervention must be seen to be 'value for money'. In countries with limited resources, strong collaborations between government and NGOs are strategic because they are able to increase cost effectiveness¹⁶.

Inherent problems in the accuracy of costing studies make it difficult to compare like for like and little information is available on the cost of scaling up HIV prevention and care programmes nationally⁷⁴. Costing an impact depends on the approach to scale up that is chosen, the indicators selected and, in the case of donor-supported programmes, variations in the foreign exchange. Costing studies are often conducted early in a programme and are used to justify further expenditure. In fact they also need to take into account the maturity of the programme as service uptake and delivery vary over time. For example NGOs that are scaling up may tend to rely heavily on volunteers in the early stages and less so in later stages⁷⁵.

Accurate costings are also important in maintaining confidence in the programme. In the donor-driven climate of HIV services scale up, issues of integrity, perceived

integrity and accountability are paramount to the success of funding applications for national programmes. If government predictions of costs are too high and funds have to be returned it can make it hard to apply successfully for a second round of funds. Similarly if organizations under-budget, they will not be able to achieve their outputs and desired goals¹².

2.3.6 Demand creation

Public health campaigns have long recognised the need for effective demand creation and awareness raising through information, education and communication (IEC) materials, public relations activities and through mass media campaigns. Health information transfer has also been done successfully in resource-poor settings by health talks conducted in clinics, through the use of public health officers who travel on foot or by bicycle to remote areas and at community meetings⁷⁶.

In the private sector, the launching of new goods and services is usually accompanied by mass media advertising campaigns. Public health programmes have used a similar approach, often referred to as social marketing⁷⁷. Mass media communications campaigns based on theories of behaviour change have been shown to influence societal norms and individuals' behaviours⁷⁸⁻⁸⁰. They have been an effective public health tool to promote vasectomy, family planning, condoms, smoking cessation, and insecticide treated bed nets among others⁸¹⁻⁸⁵. There are advertising lessons to be learnt from the private sector of relevance to health services scale up for example in the soft drink market key elements include strong branding that associates a logo with quality assured standard and reliable supplies. If a soft drink like *Coca Cola* can be so popular and available (chilled) in every village in Kenya then why not VCT?

National coordination is required for an effective mobilisation campaign. Initial services need to exist before demand creation is commenced and the media promotion may be phased-in in stages so that demand can be met.

2.3.7 Integrated quality assurance systems

Quality Assurance is basically a simple idea used in industry as well as other tertiary services. Quality assurance systems for health care have become increasingly important in resource-poor countries that face the challenges of rapid scale up, poor support, under-funding and low morale. Standards are set for a service, managers ensure that the service is delivered in such a way that these standards are met consistently, and the client is therefore assured of the quality of the service.

Definition of Quality Assurance⁸⁶

Quality Assurance is a systematic and planned approach to monitoring, assessing and improving the quality of services on a continuous basis.

Rapid scale up of services raises concerns about whether quality and equity objectives can continue to be met. Some would argue that quality assurance (QA) should be an integral part of any health service organization. It addresses the issues of access, acceptability, equity, safety, effectiveness and efficiency of service delivery and so contributes to the goal of producing better health in communities. It also helps create public confidence and community involvement in the services. With the global expansion of VCT, the increasing need for quality assurance systems has been recognised internationally. Numerous tools have been developed and trialled in

different settings^{87;88} however there is no description in the literature of the direct integration of QA systems into VCT at the outset of scale up.

2.4 Does HIV require a specific response? Key challenges to consider in scale up

2.4.1 Is HIV a 'special case'?

Some would argue that the rapid global spread of HIV in itself is an indication that a more tailored and specific response is required. In view of the scale of HIV: 40 million infections; leading cause of death in sub-Saharan Africa; 5 million new infections globally a year⁸⁹; there is a moral and humanitarian need to increase the specific responses required to reverse the progress of the pandemic⁹⁰. Unlike many other health issues, the last decade has seen rapid global changes in coping with HIV. International advocacy has been unique in bringing global efforts together and starting united programmes such as the Global Fund⁹¹ and 3 by 5¹⁷. Currently the increased treatment availability for HIV with antiretroviral therapy has implications not only for the scale up of access to HIV testing but also for all HIV services, whose coverage, despite these efforts has remained low. The estimated existing coverage of prevention efforts is extremely variable (thought to be as low as 20% in sub-Saharan Africa)⁹² and of care and treatment for HIV even lower (5%)¹⁶.

However, treating HIV as a special case risks creating an aura of separation and thereby of increasing stigma in health professionals and others and exacerbating the epidemic⁹³. There is an argument for normalizing HIV and therefore for an integrated service response to it. However, attempts to make HIV testing routine in many settings have led to concerns about human rights abuses and have yet to have an impact on the epidemic^{94;95}. HIV programming needs to take into account both that

HIV is a taboo topic and that there is a wide spectrum of approaches, reflecting differences in belief around whether or not HIV requires a specific response.

2.4.2 HIV/AIDS is a taboo topic

HIV requires an open and sensitive response that is threatening to politicians and to the perceived fabric of society. It touches on taboo subjects such as sex, sexuality, commercial sex work, drug use and death. None are comfortable topics for discussion in the social or political arena and all are surrounded by social prejudice. Furthermore, clashes within cultures make collective decisions about responding to the challenge of HIV difficult. Stigma and fear of grappling with the ‘invisible’ problem of HIV have led to many governments, including Kenya, being tardy in their responses to HIV. Organizations working from the ‘bottom up’ and tackling HIV through a more individual or community level approach have therefore traditionally filled this gap.

Successful scale up of HIV services requires multi-sectoral working approaches⁹⁶. It requires government to take the lead and to put its own resources behind the fight against AIDS, engaging directly with issues of stigma and community involvement⁹⁷. Furthermore it requires locally developed responses that are able to overcome taboo areas and are flexible enough to change as new technologies and new knowledge emerge as well as being robust enough to incorporate the rapid global changes in perspectives on access to treatment and care.

2.4.3 Partner and stakeholder interactions influence scale up in the context of HIV

The conflicting understandings of how best to approach HIV testing, outlined in section 2.4.1 above, meant that natural allies were reluctant to work together because

of fundamental differences: with some wanting to normalise testing and make it increasingly routine, with others arguing from a human rights perspective on the ‘special case’ of HIV^{94;98}. Furthermore, interactions in the donor world and the ‘trendy’ money committed to HIV testing have acted both to enhance collaboration and to destroy it. On the one hand monies have encouraged a more synergistic approach, catalysing action on HIV and on the other they have had a negative impact in allowing the donor community too much control over strategies and implementation of scale up. In many cases, NGOs have become more accountable to their donors than to the government. In the 1990s there was a burgeoning of HIV-related NGOs hoping for funding. The term ‘boutique interventions’ was coined by some to describe the manner in which much of the work is done by ‘projects’ of non-governmental organizations and small pilot studies through academic institutions⁹⁹.

In contrast to this there is a more recent move among the donor communities, such as the UK Department for International Development, towards working directly with government or with sector –wide approaches (SWAps) and many NGOs, rooted in communities, are finding it difficult to get funding. Both policies have led to rivalries and jealousies between HIV organizations that should be natural allies.

International policies became powerful determinants of scale up in the Kenyan context. The details of partners and stakeholders in VCT are outlined in chapter 3 ‘Kenyan background and context’ and an exploration of the effect of these interactions on VCT scale up is explored further in the results and discussion chapters of this thesis.

2.5 Gender and equity in HIV scale up

While all health responses require an equitable and gendered approach¹⁰⁰, this is particularly urgent in HIV, which exploits gender disparities and social inequities.

2.5.1 HIV exploits gender disparities

HIV disproportionately affects the poor and women⁸⁹. Inequities not only contribute to the on-going spread of HIV but also increase the challenges in responding to HIV. Any effective programmes in expanding HIV services must specifically address issues of equity, access and vulnerability in their design⁶⁰ and carefully monitor whether stated sentiments around equity are actually a reality in programme implementation.

Given that the HIV epidemic is socially driven and disproportionately affects women and the poor, it is important that lessons from other health services are learnt and specifically addressed in the response to HIV and the planned scale up of services. Globally there is evidence to suggest that poor women experience greater barriers to accessing health care services than richer or male counterparts. TB diagnostic and treatment services have been shown to have lower rates of case detection and treatment in women and poorer people¹⁰¹⁻¹⁰⁴. Malaria services have encountered similar disparities¹⁰⁵⁻¹⁰⁷ and a study of treatment of onchocerciasis in Sierra Leone showed that women were excluded from having ivermectin treatment because of pregnancy or breastfeeding infants and did not seek treatment once they became eligible for it¹⁰⁸.

Women often do not have equal access to those resources available within households, where a male head will often decide how financial resources are

allocated¹⁰⁵. Many women have limited access to knowledge and make decisions based on insufficient information. Women can be discouraged by the bureaucracy surrounding the delivery of drugs, including understanding and signing documents if they cannot read and write, or not wanting to ask basic questions for clarification of their treatment¹⁰⁰. Where there is also a culture of obedience to male relatives (such as needing permission to travel), women find it particularly difficult to access ART and HIV services¹⁰⁹. In addition, women who do not conform to social norms such as commercial sex workers¹¹⁰ and intravenous drug abusers are often excluded from services.

The stigma of living with HIV/AIDS is often more extensively directed against women^{97;111} who risk being labelled as promiscuous or as prostitutes and fear threats of violence and abandonment. While disclosure is harder for women¹¹² so will tablet taking be. Having to explain what tablets are for to a potentially violent partner is a significant barrier to many.

2.5.2 How equitable is the scaling up of HIV service provision in Africa?

At the start of this study, there was no ART in Africa outside of the private sector and treatment inequity has become evident as it has become more available. In African countries the number of people in need of ART greatly outstrips availability and access may be based on first come first served, which often favours male, educated, non-poor city dwellers. In Zambia, where an estimated 70% of the 2 million people living with HIV/AIDS are women, only 10% of the people accessing ART in 2005 were women¹¹³. Women are not being targeted with information about HIV/AIDS, testing¹¹⁴ and ART. Where there are direct costs for ART, both poor women and men

have limited ability to access ART¹¹⁵ but men take priority in accessing treatment as they have control of the household finances with women accepting their low status¹⁰⁵. Where women have some independent access to financial resources, they may forgo food or other essentials to pay for health care¹¹⁵. Even if treatment is free, other indirect costs, such as laboratory tests, transport, loss of earnings from employment or loss of production that are incurred can prevent women's access to treatment¹¹⁵ as discussed above. It is not only loss of productive earnings that can be a barrier to women accessing services. Finding people to help out with their multiple other responsibilities (such as childcare) whilst attending services can be problematic.

2.5.3 Concerns about human resource and health systems implications of scale up

The human resources and health systems implications are an important component of the sustainable type of response to HIV that is required¹¹⁶. Not only is a commitment required to employing more health staff overall and to stemming the 'brain drain' of trained health care staff to richer countries¹¹⁷, but also the staff already in health centres need to be left to do their jobs. The recent attention given to the selective delivery of packages of interventions, such as increased access to antiretroviral therapy can have the unwanted effect of diverting energy and resources from developing essential health services²⁹. This has already been witnessed in many countries where the incentive of allowances and sitting fees that come along with workshop attendance are sufficient to cause disharmony among colleagues, to divert staff to vertical programmes and to cause neglect of 'core' services in primary health care centres. Anecdotal reports from District Medical Officers indicate that in any given week, as many as half the staff may be away on training days for HIV in a health centre whose prime services are antenatal care, childhood immunisations,

malaria control and family planning (personal communication, Dr J Kibaru, District Medical Officer (DMOH), Thika, 2002). At the same time HIV is having an impact on human resources with health staff affected by and infected with the virus.

While it is important to focus on rapid action in HIV services scale up, sustainability must not be ignored and human resources must be carefully considered when preparing for scale up^{88;118}. As is the case in ART programmes in South Africa¹¹⁹, the failure to invest sufficiently in human resources-especially nurses-is likely to constrain the growth of VCT coverage and access to HIV treatment in Kenya. Programmes in sub-Saharan Africa have called for donors¹²⁰ to support human resources if they are to meet targets and provide a public health approach to HIV services as recommended by the WHO^{121;122}.

2.6 Scaling up VCT

2.6.1 What is VCT?

Voluntary Counselling and Testing (VCT) for HIV is largely aimed at the asymptomatic individual who wants to know his or her HIV status. Those who wish to be tested for HIV go to a site voluntarily and are offered pre-test counselling, on-site rapid HIV testing, and post-test counselling. VCT is for ordinary people like 'you and me' deciding to get an HIV test so that they can act on the result. It is client-initiated and therefore linked to behaviour change since people are all more likely to do something that they have decided to do than something that they have been told they must do. The counselling session is client-centred. With the guidance of VCT counsellors trained in HIV risk reduction, counselling clients ask themselves questions such as '*now that I am negative how will I stay negative?*' Or '*now that I*

am positive, what can I do to stay healthy?’, ‘what does a positive result mean in my life?’. VCT offers a holistic approach that can address HIV in the broader context of peoples’ lives, including the context of poverty and its relationship to risk practice.

VCT is thought to provide benefits for those who test positive as well as those who test negative. The evidence-base for the effectiveness of VCT as a behaviour change intervention is discussed in more detail in section 2.6.3 below. It is an entry point to other HIV/AIDS services including prevention of mother-to-child transmission; prevention and clinical management of HIV related illnesses, tuberculosis control, and psychosocial support.

2.6.2 Models for providing VCT services

Traditionally, VCT has been provided in health facilities or in non-medical settings such as community sites and “stand-alone” VCT centres in non-clinical settings¹²³. It may also be provided in the private sector, in mission hospitals, through NGO partnerships with health facilities and through mobile outreach vans. The choice of model or models depends upon a programme’s goals. It is also influenced by cost, cost-effectiveness, sustainability, client perceptions about confidentiality and convenience to the client¹²³. It is common in any given country to have a combination of these operating to maximise coverage and ensure accessibility, acceptability and affordability of the VCT services to the entire population. The advantages and disadvantages of different models are outlined below.

VCT sites set in a non-medical environment such as residential areas, a shopping arcade or religious building are often called ‘stand-alone sites’. They are deliberately

not associated with an existing medical institution and usually have staff fully devoted to VCT. The sites are non-medical therefore reinforcing the message that HIV testing is for well people. Experience from other countries¹²³⁻¹²⁵ has shown that stand-alone sites can meet increasing demands and attract young men that would not otherwise attend. Initial fears that the association with HIV testing would be stigmatising have not been realized in settings that combine stand-alone sites with mass media campaigns such as PSI-run sites in Zimbabwe (New Start) and Tanzania¹²⁶. These sites are usually located in areas of high population and HIV prevalence for reasons of cost and cost-effectiveness.

Sites located in health facilities that actively make and receive referrals to other health services in the facility are sometimes called 'integrated sites' as without the referral pattern they would merely be 'co-located'. Integrated sites are located in hospitals, primary health care centres, sexually transmitted disease, tuberculosis (TB) or family planning clinics. The antenatal care setting has been considered separately due to the different needs of HIV testing in the prevention of mother-to-child transmission (MTCT) interventions. Location within a health facility allows direct referral of those who test positive to other relevant care. This approach has the benefit of promoting VCT as a general health service and of normalising HIV testing⁹⁸. It involves health care workers directly in HIV prevention activities and thus may further decrease stigma. Patients who visit busy health centres for other services are exposed to knowledge of VCT and are also potential clients. However, there are a number of potential challenges of this approach to scale up as VCT may divert scarce human resources away from other services affecting both the quality of VCT and of other services¹²⁷. Many clients have negative perceptions of the quality of services offered

in government health centres where they are confronted with poor motivation in public sector employees, limited administrative and managerial capacity, long waiting times and inconvenient hours of operation.

A significant proportion of health care services are provided in the private sector in resource-poor settings. Private facilities are seen as having a commitment to providing high quality of care and as being private, confidential and responsive to client needs. This sector is however unregulated and unmonitored. There is no way of assessing if a centre is adhering to government or international standards for quality testing and counselling. The private sector model is inaccessible to the poorer population.

2.6.3 Why scale up VCT?

The current evidence-base for VCT is focused primarily on whether provision of VCT is associated with a change in an individual's HIV risk behaviour. Research conducted in Kenya, Tanzania and Trinidad provides the only evidence from a randomized controlled trial on VCT efficacy⁵. In this study, individuals or couples recruited were randomized into VCT or 'health information' arms. Self-reported behaviour and the prevalence rates of STIs were recorded before and at 6 months follow up. A second follow-up, at a mean of 13.9 months after the intervention, recorded only self-reported behavioural indicators. Other studies measured the 'efficacy' of VCT in Africa through non-randomized designs. The earliest of these was published in Zaire (now the Democratic Republic of Congo) in 1991¹²⁸ but all have the same basic design. Individual self-reported behaviour was recorded prior to and at some interval after VCT, with all behavioural modifications being attributed to the intervention.

Taken together, the studies provide evidence for a reduction in self-reported risk behaviour. This is most marked in HIV positive individuals^{5;129;130} and in couples, particularly HIV discordant couples (where one partner tests positive and the other negative) who test together^{5;128-131}. Seventy-seven percent of the Zairian sample of sero-discordant couples reported consistent condom use 18 months after VCT, compared with 5% before¹²⁸. Clients testing as individuals also reported sexual behaviour change. In the multi-centre VCT Efficacy Study described above⁵ the proportion of individuals reporting unprotected sex with their non-primary partners declined significantly more in the VCT than in the health information arm (men, 35% reduction with VCT vs 13% reduction with health information; women, 39% reduction with VCT vs 17% reduction with health information).

These findings have boosted interest and support for VCT as a valuable component of a comprehensive HIV/AIDS programmes. They have been widely and uncritically quoted by the WHO, international organizations, donors and AIDS control programmes to justify scale up. They argue that VCT alleviates anxiety, increases client's perception of their vulnerability to HIV, promotes behaviour change, facilitates early referral for care and support¹³² and assists reduction of stigma in the community. Knowledge of HIV status, ideally through a client-initiated programme such as VCT¹³³ is seen by many as the first and necessary step for the scale up of all effective HIV programmes.

Despite international enthusiasm for VCT there remains limited evidence. The strongest evidence is that high risk behaviour is reduced substantially after finding out an HIV positive result¹³⁴. There is far less understanding of the behavioural

consequences of VCT for HIV negative clients. More recent follow up studies presenting data on behaviour change in VCT have failed to show any impact of VCT on behaviour change in those testing HIV negative. The first, conducted in an urban Zimbabwean workplace¹³⁵, investigated the impact of VCT on HIV incidence. Comparison was made between on-site VCT and pre-paid vouchers to an external provider. The study concluded that the highly acceptable on-site VCT did not reduce HIV incidence in this predominantly male cohort. HIV incidence was highest in the high uptake VCT arm, lending support to evidence from the United States in which rapid testing appeared to have adverse behavioural consequences in some HIV-negative clients¹³⁶. These findings are supported by new evidence emerging from rural Zimbabwe that individuals who had tested negative through VCT were significantly more likely to engage in subsequent risky behaviour than those who did not take an HIV test. HIV incidence in this study did not differ between tested and untested groups¹³⁷. These studies imply that acceptability (or uptake) of VCT and behaviour change are distinct outcomes and may vary under different approaches to providing VCT.

When planning service expansion, the limitations of the studies with positive findings, the new evidence from negative findings and the replicability of the findings in a scale up situation need to be considered.

2.6.4 Limitations of existing studies

An extensive review of VCT evaluation studies was undertaken by Glick in 2005¹³⁸ who disputes the likely prevention benefits of VCT as the VCT 'studies' to date have primarily reported from adequacy study designs rather than plausibility or

probability²² (see section 2.3.3 above) with little discussion of the potential for bias due to an over emphasis of results on early adopters and innovators. There are a number of fundamental limitations of existing VCT studies to be considered and for the sake of clarity these have been separated into two groups: limitations of study design and lack of replicability of the studies in a scale up situation.

Study design limitations are summarised in figure 2 below. The reliance on pilot sites may skew behaviour change data. New services attract higher proportions of innovators and early adopters, whose behaviour and characteristics may not reflect the population base from which they come. Furthermore there were no accompanying studies that evaluated the baseline risk behaviours in the populations served by the VCT sites. The pre and post test (or before and after) model used by the studies assumes that change is due to the impact of the intervention and does not account for changes in the whole community that might have taken place in the interval, for example as a result of behaviour change communication initiatives, mass media campaigns, educational activities or others. The before-and-after design also means that there is no control group in many of the studies and there are few studies comparing risk reduction counselling with simple knowledge of status¹³⁹, none in sub-Saharan Africa. The studies rely on self-reported behaviour change, which is known to differ from actual behaviour change. Other limitations are the short follow-up periods and narrow outcomes: for example, condom use, STI symptoms, disclosure.

Counselling studies, which use client-centred approaches to counselling, are unable to control for the quality or therapeutic benefit for the individual counselling interaction. The one randomised controlled trial on VCT was conducted in several countries and

there are likely to have been significant differences in how the counsellors were trained, how long individual sessions lasted and what kind of support supervision the counselling staff received – all of which are likely to have impacted the client-counsellor interaction. Such is the individual variation in fact that head to head comparisons would be difficult in any VCT trial unless the counselling component was removed completely.

Figure 2: Summary of study design limitations

1. The studies were designed in pilot sites^{5;14;128;140}.
2. There are no baseline measures of risk behaviour in the population^{5;14;128;135;140}
3. Most studies use a pre and post test (or before and after) design^{5;14;128;140}
4. The lack of a control arm.^{14;128;140}
5. The studies rely on self-reported behaviour change^{5;14;128;135;140}
6. The follow-up periods are short^{5;14;128;135;140}
7. The outcomes are narrow^{5;14;128;140}
8. Studies do not control for the quality of the counselling^{5;128;140}.

There are also a number of concerns about the replicability of existing studies in a scale up situation. Studies concentrate on individual risk behaviour and disclosure rates rather than on programme impacts in the community and ultimately the bigger, and multi-factorial question of whether VCT impacts on HIV incidence and prevalence rates. The reliance of existing VCT efficacy studies on pilot studies that introduced VCT as a new service means that the results may not translate to the wider population targeted.

The studies were primarily conducted in stand-alone sites in a non-medical, non-primary health care setting, whereas sustainable national scale up programmes must incorporate primary health care services. The over reliance of stand-alone sites in pilots makes the assumption that the same model of service delivery is suitable for every setting which is not the case as outlined in more detail below. Prediction of uptake and demand is limited by our understanding of the service non-users, including a lack of baseline measures of risk behaviour, HIV knowledge and perceived risk in the population. Furthermore, the quality of VCT services may drop as scale up continues and this may compromise effectiveness. Existing studies use behaviour change as an effectiveness measure and do not take into account other valid measures such as referral rates and uptake of related services. Since VCT is seen both as a behaviour change tool and as an entry point to care these are equally valid measures.

Finally, the trials made specific and deliberate efforts to recruit couples. The low overall uptake by couples reported in the studies is disappointing as the prevention benefits, greatest amongst discordant couples, are unlikely to be realized to the same extent in a scale up situation.

Figure 3: Concerns about replicability of existing studies in a scale up situation

1. Studies concentrate on individual and not the community impact
2. over-reliance on pilot sites
3. over reliance on stand-alone
4. limited understanding of the service non-users
5. drops in quality on scale up may compromise effectiveness
6. effectiveness measures are behaviour change not referral
7. couples may be difficult to recruit in a scaled-up service.

The study limitations mentioned above in part shaped the methods and approach (chapter 4). The large database, the five year follow up period, the variety of service models used in both rural and urban locations and the combination of quantitative uptake data with qualitative data all add to the existing literature and the results (chapter 4) are discussed in the light of the existing literature in the discussion chapter (chapter 8).

2.6.5 The potential impact of ART programmes on VCT uptake

International efforts to expand access to antiretroviral therapy (ART) mean that more and more HIV positive individuals in resource-poor countries will be able to benefit directly from knowledge of their positive status through access to life-saving medication^{17;27;91}. However, since programmes in many African countries started to scale up as late as 2004 and ART availability remains limited in the public sector¹²¹, the potential impact of ART on testing through this voluntary modality is speculative and the available evidence on the impact of ART on VCT uptake is contradictory¹³⁸.

In line with WHO guidelines¹²¹ most countries, including those in resource-rich countries) offer ART to HIV positive individuals with CD4 counts below 200, or in countries where CD4 count monitoring is limited, to those with WHO stage three or four disease. In theory, knowing that there is access to drugs for those who are ill is not a draw for those who are not¹³⁸ ill to become tested and it is therefore possible that the advent of treatment availability for HIV would not increase the uptake of HIV testing through VCT¹³⁸.

2.7 Conclusion

Lessons from other health responses and from HIV scale up in other settings help the reader to situate this thesis in the Kenyan context, described in more detail in chapter 3, and to understand the findings (chapters 5-7) in the light of what is already known in the literature. The literature describes strategies used by different partners in HIV services scale up and how these can be maximised through alliances. The experiences of other programmes on equity and access are salutary and the appropriate design of programme evaluation tools/studies may mean that the lessons learnt can be used to prevent the replication of the same errors in new programmes.

Chapter 3

Kenyan Background and Context

This chapter sets the context of the thesis, outlining the population and geography of Kenya for the reader who may not be familiar with East Africa. It summarises the way that the health systems are organized in Kenya, focusing on the public sector, where the majority of this work was undertaken. It introduces the reader to the key players and stakeholders involved in HIV testing in Kenya and gives an overview of existing partnerships and collaborations of relevance to the scale up of VCT. It also discusses the extent to which HIV is adding to the existing strain on health services. An outline of the key policy responses to HIV in Kenya, including links to international trends sets the stage for understanding the push for increased access to HIV testing in Kenya and the impact of this on VCT service provision.

3.1 Kenya population and geography

Kenya is situated in East Africa, covers an area of 582,646 square kilometres and has total population of 32 million¹⁴¹. The Rift valley bisects the country west of Nairobi and opens up to a broader arid plain in the north. The climate varies from the tropical south, west and central regions to arid and semi arid in the north and the northeast. There are more than 40 ethnic groups in Kenya. The official languages are English and Kiswahili but vernacular languages co-exist. The majority of Kenyans declare themselves to be Christians (Protestants 40%, Roman Catholics 30%) with Muslims making up a sizeable minority at 20%. According to official cartographic information Kenya is divided into administrative subdivisions with 70 districts, joined to form eight provinces: seven rural and Nairobi (see accompanying map in appendix B)¹⁴¹. During the study period Rift Valley Province was divided into North and South and existing district boundaries were redrawn to create eight new districts. As a result there were 78 districts in 9 provinces by mid 2003.

Kenya is a resource-poor country with limited infrastructure, low rates of literacy¹⁴². It is currently ranked by the World Bank and International Monetary Fund (IMF) as a highly indebted poor country^{143;144}. In line with many resource-poor nations the infant mortality rate is high (120/1000) and life expectancy low (50 years)¹⁴⁵. The Kenyan economy is predominately agricultural. Business and industry are focused in Kenya's four major cities: Nairobi, the capital city (population of 2.1 million); Mombasa an ancient port at the Coast (pop.665, 000); Nakuru in the Rift Valley (pop. 1.2million) and Kisumu on Lake Victoria in the west (pop.504, 000)¹⁴¹. A basic network of roads and airports links these conurbations. Outside of the main cities and municipalities the poor state of the infrastructure means that areas that may not appear geographically remote often take several days to reach in practice.

3.2 Health systems and structures in Kenya

3.2.1 Organization of health systems in Kenya

Kenya's public health system is governed by the Ministry of Health. Dispensaries and health centres are the first port of call for most service users. Dispensaries may be staffed by one trained health care worker only, whereas health centres generally have upwards of 6 staff, including at least one clinical officer, nurses, a nutritionist, a physiotherapist, a public health technician and in some cases a small laboratory. All health centres dispense drugs. In theory, standard drug kits are supplied on a monthly basis, however, in practice there are frequent stock-outs¹⁴⁶. Drugs for the treatment of TB and STIs are delivered separately by vertical programmes¹⁴⁷. Health centres were originally designed to cover a division (with average populations of 70 to 100,000 and rising) and to provide basic medical care, immunisations, antenatal care and STI

treatment. District and sub-district hospitals act as referral points for in-patient care, outpatient clinics and investigations such as chest X rays or some blood tests. The provincial hospitals and the Kenyatta National Hospital act as tertiary referral centres and nationwide, the 0.14 doctors and 1.14 nurses per 1000 population¹⁴⁵ are concentrated in these centres. Health expenditure per capita is 1.4 international dollars¹⁴⁸ however implementation of policies means that much of this is spent at central rather than facility level¹⁴⁶.

District Health Services are coordinated by the District Medical Officer of Health (DMOH) (a clinician by training) who oversees the District Health Management Team (DHMT). The post of DASCO (District AIDS and STD Control Officer) was established in 1997 to oversee the HIV activities in each district. DASCOs are represented on the DHMT alongside the District Public Health Nurse and Officer, the Hospital Matron, administrative and education officers. Alongside this basic primary health care structure, a number of vertical programmes have been partially integrated at district, provincial and national levels. These include TB and leprosy control⁵⁶ and the Expanded Programme of Immunisation¹⁴⁹. The District TB Officer thus reports in the first instance to Provincial and National TB control programmes and although nominally under the DHMT it does not provide line management. Other programs such as Family Planning, which began as vertical programmes, are now fully integrated into primary health care structures without external support or reporting mechanisms.

In Kenya there are an abundance of private clinics offering health services. Many of these facilities function as unregistered and unregulated small private businesses.

They are beyond the reach of official registration, inspection or sanctions and wide variations in standards of care are the norm¹⁵⁰. Furthermore, many Kenyans will use traditional healers as well as or instead of the medical facilities outlined above¹⁵¹. In addition to the sectors mentioned above there is a large network in Kenya of mission hospitals, NGOs and CBOs with a health focus and in many cases it has been these that have provided a reputable link into the community for donors looking for implementing partners outside of the public health sector.

3.2.2 Strategic alliances and the involvement of donors in the Kenyan health system

At national level, alliances with donor countries have provided support both to essential health services such as reproductive health and to vertical programmes. An example of this is the financial support afforded by the Dutch government to the Kenyan National TB and Leprosy Control Programme alongside technical support from the Royal Netherlands Tuberculosis Association (abbreviated as KNCV)⁵⁶.

Traditionally, the donors associated with population and reproductive health activities have been the bilateral aid wings of wealthy Northern governments (notably the United States, Britain, Germany, Netherlands and the Scandinavian countries) and the major United Nations multilateral institutions, notably the UN Population Fund (UNFPA) and UNICEF. Over the last five years, however, North American donors have become increasingly reluctant to be seen to be supporting family planning initiatives, termination of pregnancy and in some cases condom use, a move that has had far reaching consequences in partnerships and support to HIV prevention²⁷. Donor support is thus political and may impede service integration⁴¹. Differing perspectives on funding HIV work in Kenya have led to tensions in approach between

donors and also between donors and the government, undermining the potential for strategic alliances referred to in the literature review (sections 2.3.1 and 2.4.3).

The two major players in the scale up of VCT between 1999 and 2006 have been the DfID and the United States Agency for International Development (USAID). Both of these worked through 'implementing partners' – Futures Group Europe¹⁵² in the former case and the IMPACT project managed by Family Health International¹⁵³ in the latter. Both of these worked closely with the GoK and local implementers including Kenyan NGOs and CBOs to support the opening of VCT services on the ground. As well as working to influence policy, the US Centers for Diseases Control (CDC), in contrast to policy in many countries, became a VCT implementer in Kenya, active in the direct provision of VCT through stand-alone sites Kisumu (Nyanza) and Nairobi. Other donors have since followed suit with multiple donors now contributing on a smaller scale to VCT sites in the region¹⁵⁴.

While national level alliances may be mirrored at district level, many districts also financially supplement government health services through smaller local initiatives (for example in Malindi district, through the initiative of the Medical Officer of Health, Swedish Rotary have funded building and other work at the district hospital). These tend to be less political but also less sustainable as most are one-off donations of relatively small amounts.

3.2.3 Kenyan health systems under strain in the era of HIV

Kenya, like many resource-poor countries, has a chronically under-resourced health care system and a high prevalence of poverty¹⁴². It continues to lose large numbers of qualified health care workers to more lucrative jobs in Europe and America every year. On the one hand the GoK are committed to scale up of access to HIV services, on the other hand donors are unwilling to fund salaries and a recent International Monetary Fund moratorium¹⁴⁴ on hiring of civil servants means that despite increasing work loads, the government are not able to hire additional health professionals¹⁵⁵.

The recent push for increasing access to antiretroviral therapy for HIV in Kenya reflects international trends and has considerable international support from the WHO's 3 by 5 initiative¹⁷, the Global Fund⁹¹ and the United States' President Bush's Emergency Plan for AIDS relief (PEPFAR)²⁷. In Kenya this has led to a patchwork of NGOs, vertical programmes and piecemeal efforts at larger hospitals, fuelling the debate on human resources in HIV service provision^{121;122;127;156}. While the WHO advocates a public health approach to scale up¹²¹ new resources will need to be channelled into Kenya's health systems if effective, equitable¹²² and public health access to antiretrovirals is to be achieved.

3.3 HIV prevalence in Kenya

In 2000, when this work commenced, an estimated 2.2 million adult Kenyans were infected with HIV². Prevalence rates show significant regional and rural /urban variations, with average urban prevalence of (10%) nearly twice that in rural areas (5-6%)¹⁵⁷. Some districts in Nyanza province have prevalence rates in excess of 30%¹⁵⁷.

Currently Kenya is experiencing an overall decline in reported HIV prevalence rates to around 7%-10%¹⁵⁷

Of all those infected with HIV in Kenya, about two thirds are women^{2,157}. This female to male ratio is in keeping with world-wide data that young women are particularly vulnerable to HIV and the gender differences in Kenya are most pronounced among young people aged 15-24 where female prevalence rates is nearly five times higher than male rates¹⁵⁷. The continuing feminisation of HIV prevalence in Kenya reflects international debate on the need for equitable access to HIV services and the need for gender and poverty lenses in the design of policy and programmes in response to HIV.

3.4 Policy responses to HIV in Kenya

In response to HIV/AIDS and in line with international efforts to curb its spread, Kenya has established a National AIDS Control Council (NACC). This provides national coordination for HIV interventions through a process known as the Joint AIDS Programme Review (JAPR) and the development of policy documents. The *National HIV/AIDS Strategic Plan*⁹ forms the basis of HIV interventions. A subsequent plan for *Mainstreaming Gender into the National HIV/AIDS Strategic Plan* has been undertaken further putting the spotlight on gender issues in HIV prevention as well as care¹³. Recently a *National HIV/AIDS Policy* has been drafted and is ready for presentation to Parliament. Under the NACC umbrella each ministry has established an AIDS Control Unit (ACU).

The Ministry of Health's ACU became the already existent National AIDS and STD Control Programme (NAS COP) and took prime responsibility for programme development and scale up in the areas of HIV counselling, testing, treatment and care. In 2001, shortly after the start of the scale up process commenced, *National Guidelines for Voluntary Counselling and Testing* were published by NAS COP¹⁰. While NACC has been plagued by frequent changes of leadership, corruption charges and poor relationships with donors, the lower profile NAS COP has been able to forge more lasting partnerships. This has allowed strategic alliances to flourish between the government, donors and other stakeholders as well as directly between non-governmental organizations.

3.4.1 HIV prevention and condoms

A cornerstone of Kenya's HIV prevention policy has been the promotion and use of condoms¹⁵⁸. The government aims to ensure an adequate national supply of and access to condoms. It also aims for education and advocacy to increase use and states it will follow the example of other countries in supporting the distribution of female condoms as a means of empowering women to choose safer sex^{159;160}. To ensure condom quality, the GoK has established a National Quality Control Laboratory. The government also regulates the sales and private distribution of condoms so that only products that meet the WHO standards and specifications are allowed for sale and use.

3.4.2 Increased access to treatment and care

In line with the international trends and initiatives outlined above, Kenya has seen a rapid increase in access to HIV treatment and care since 2003¹⁶¹. Treatment and care have become so much the focus of donors and the JAPR that earlier support to

prevention programmes has dwindled in the face of pressure to meet national and donor targets. The potential impact of access to antiretroviral therapy (ART) on VCT services is discussed further in section 8.5 below.

3.4.3 Increased access to testing

In the *National HIV/AIDS Strategic Plan*, Voluntary counselling and Testing (VCT) is recognized both as a prevention tool and as an essential entry point to care and treatment for those who find they are infected by HIV/AIDS. In keeping with many other countries in the region, there is no early differentiation of diagnostic and routine HIV testing for symptomatic patients from VCT services and in early documents and policies all forms of testing outside of PMTCT were called ‘voluntary’. In 2000 therefore a focus was put on scaling up VCT services in the country both as a key prevention strategy⁹ and also to increase access to treatment and care.

3.5 Voluntary counselling and testing in Kenya and regionally

Research in Kenya had shown that VCT was effective in reducing HIV risk behaviour⁵, and pilot projects indicated that it was both acceptable to Kenyans and feasible to implement in public health settings^{7;8}. The GoK made a commitment in 2000 to the rapid expansion of VCT services, declaring that it would open 350 sites by the end of 2004, 5 in each of the 70 districts in Kenya²⁶. Donors and international organizations pledged support for increasing VCT in both public sector and community sites. A National VCT Coordinator was appointed by NASCOP and a taskforce was established. The Kenyan scale up programme soon overtook other countries in the region, in particular its commitment to opening sites in public facilities^{162;163}. By the end of 2005, over 650 sites had been opened and all of Kenya’s

cities and municipalities had VCT services operating although remote rural areas continued to be underserved¹⁶⁴.

3.5.1 Professional groups in HIV counselling and testing in the year 2000

At the beginning of 2000 HIV testing in Kenya was largely conducted in hospital laboratories and without pre or post-test counselling^{3,6}. Neither the testing nor the counselling aspects were consistent or quality assured and confidence in the service and results was limited. At that time HIV testing was conducted almost exclusively by laboratory staff and HIV counselling in a separate environment by professional counsellors. Hospital-based diagnostic testing was rarely if ever accompanied by counselling. All forms of testing were accompanied by written results³.

Laboratory operations in Kenya are regulated by a government-appointed board: the Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB)¹⁶⁵. In addition qualified laboratory personnel can join a professional association or union, the Association of Kenya Medical Laboratory Scientific Officers (AKMLSO)¹⁶⁶. Like many cadres of health professionals in Kenya there a significant number of unemployed laboratory staff and an employment embargo¹⁵⁵.

The counselling profession is not currently recognized as a cadre within the GoK and counselling associations struggle to gain recognition for their profession in the country. As well as theory-based university courses in counselling psychology, two large associations of professional counsellors undertake generic training to certificate, higher diploma and Master's level. At the beginning of 2000 there was no unified curriculum for the training of HIV or VCT counsellors.

3.5.2 The establishment of the National VCT taskforce

In response to increasing donor and government interest in VCT in Kenya the Ministry of Health, under the National AIDS Control Programme, established a national VCT taskforce in September 2000. Development of national policies and guidelines to regulate VCT became an essential component of Kenya's approach to scale up¹⁰. The national committee was formed with representatives from the Ministry of Health's NASCOP, counsellor organizations, the Kenya Medical Laboratory Technicians and Technologists Board, donors and international partners, people living with HIV, and other stakeholders. Guiding principles articulated by the committee for inclusion in policy documents state that VCT services should be *private, confidential, accessible, affordable, and convenient*. The committee membership included VCT providers from pilot sites who contributed practical lessons learned in the field.

3.5.3 Test kit procurement and quality assurance of testing for VCT in Kenya

At the outset of planning it was clear that there was a need for robust national systems for procurement and distribution of test kits as any interruption in test kit supplies had the potential to bring the VCT programme to its knees. Adequate funding was earmarked by the taskforce through the World Bank loan and DARE project¹² and a subcommittee on logistics was established.

An early decision was made by the national VCT taskforce to use two HIV rapid tests at the same time (in parallel). If the results concurred then that result, whether positive or negative, was to be given to the client. If the results differed (were discordant) a third test was to be conducted. The use of parallel testing provided an internal control

mechanism in addition to the controls built into each kit. Since rapid tests used fingerprick samples, serum samples were not obtained for external quality control. Rather a further ten drops of whole blood from the fingerprick were obtained and air-dried on filter paper. These filter papers could then be stored with desiccant and sent to a reference laboratory where the samples could be eluted and retested against a panel of HIV tests. Staff in the reference laboratory were blinded to the results given out by the counsellors and feedback to the sites ensured that any mistakes in standard operating procedures were soon identified.

3.5.4 Mass media and VCT in Kenya

The early decision by the taskforce to undertake professional mass media promotion of VCT in Kenya and the nature of the specific campaigns are described in more detail in chapter 6 (qualitative results). These mass media campaigns and the social mobilisation for VCT captured the public's attention. VCT became the focus of radio talk shows, church meetings, newspaper articles and at least one popular television comedy skit. In August and September 2003, there was a large press debate about quality standards and about who should conduct testing in VCT. Popular daily national papers carried almost daily articles on the debate with headings such as 'Sincerity Lacking in VCTs', 'The Big Issue: Panic over HIV testing'; 'Fix it now, VCT debate getting out of control' and 'government defends VCTs' (Appendix C).

3.5.5 Estimated costs of providing quality assured VCT services in Kenya

The costs of voluntary counselling and testing are estimated to be between \$US 10 and \$US 32 per clients served^{7;167;168}. They have been assessed in a small number of early studies, which have found VCT to be both cost effective¹⁶⁹ and a service that

clients are willing to pay for⁷. All published studies to date consider only service provider costs. They do not calculate opportunity costs or other hidden cost barriers to clients.

Information from selected stand-alone sites suggests that it costs about \$15 per client for VCT services, including rent, salaries, and quality assurance¹⁶⁷. For community-based organizations (CBOs) that integrate VCT into their other services, and often use volunteer staff, the cost was found to be about \$10 per client. In health facilities, costs range from about \$11 to \$13¹⁶⁷. Mobile services are more expensive, though these costs have not yet been analysed thoroughly.

3.6 Conclusion

As a poor country in the heart of the HIV epidemic Kenya has faced increasing strain on existing health systems and resources. Government funding, linked with donor initiatives have led to a multi-faceted response to HIV. In line with international and regional trends in early 2000, HIV voluntary counselling and testing was an early and prominent component of Kenya's response to the epidemic.

The progress of VCT scale up in Kenya since 2000 has been well-documented through the national monitoring and evaluation systems and through the collection and reporting of VCT client data^{161;164}. The process of scale up (policy and protocol) has also been documented¹⁷⁰. What is less well understood is how VCT scale up managed to happen in Kenya with the speed, timing and quality that it did. Was it merely a matter of money? What was the additional contribution of individuals being in the right place at the right time? Where there factors, which hampered or enhanced

progress? What were the main challenges encountered on the way? What recommendations could be made to others embarking on a similar process? This thesis sets out to explore the VCT scale up process in Kenya through operational research combining quantitative and qualitative methods.

Chapter 4

Methodology

This chapter lays out the timeline of data collection and analysis. It explains the multi-method design of the research, giving details of data collection, quality assurance and analysis.

4.1 Multi-method design forms a basis for operational research

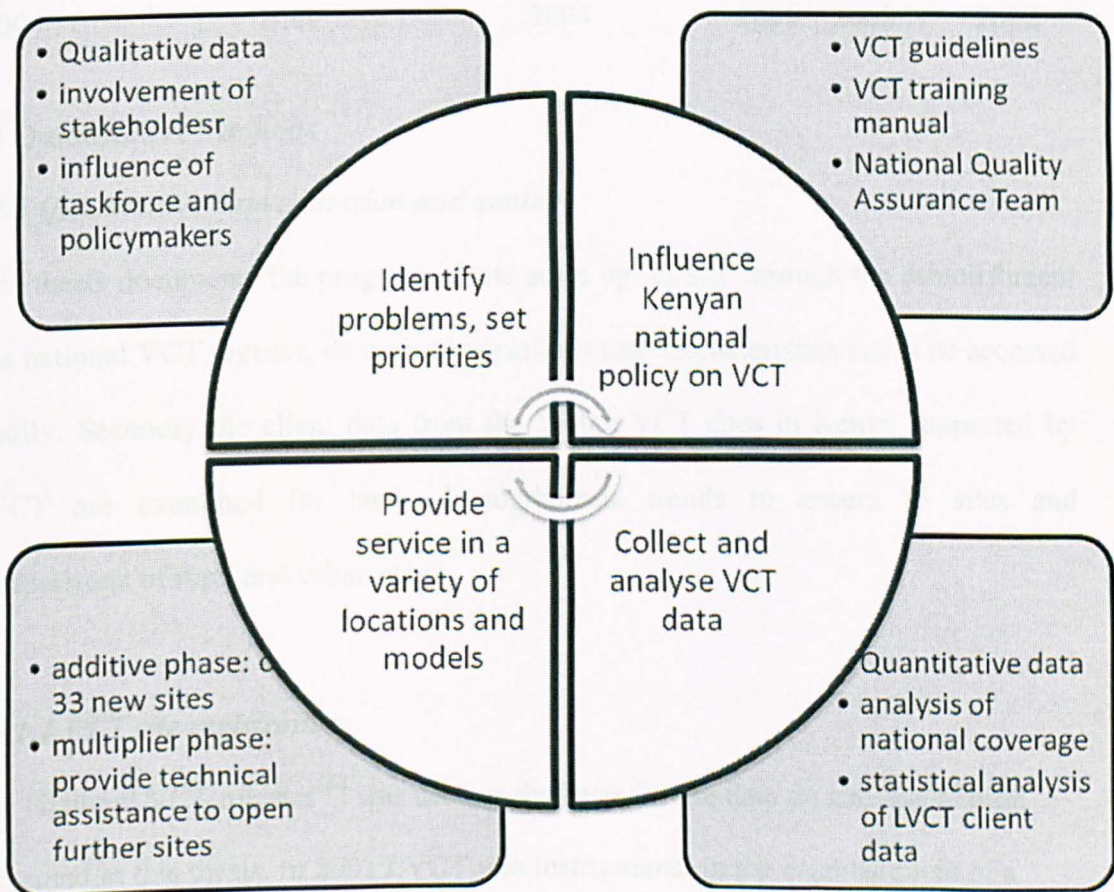
The phrase ‘quantitative research’ describes a statistical process of collecting, summarising, analysing and drawing conclusions from numerical data points. Each step was crucial in the operational research process to ensure that the correct conclusions were ultimately drawn about VCT scale up. The goals of the quantitative research described in this thesis were:

1. to collect appropriate data points in sufficient numbers.
2. to summarise and display the VCT data in order to become familiar with it.
3. to analyse the data appropriately according to its distribution (for example normally distributed data) and denominator. The statistical methods employed throughout this thesis are discussed below.
4. to draw the correct conclusions from the data.

On the other hand qualitative and participatory approaches to operational research aim to generate knowledge and information that reflects the perceptions, understandings and practices of different groups^{171;172}. These approaches help to identify local needs and priorities with respect to VCT and to place issues in the Kenyan context. The goal of the qualitative research is to be able to give informed direction to VCT service provision and programme development.

The combined use of quantitative and qualitative research methods is dictated by the objectives of the operational research and the subject matter²⁴. In this thesis, quantitative methods were required in order to document the *progress* of scale up, to ask questions about the clients accessing VCT sites and to analyse patterns and characteristics of service users. Qualitative methods were required to explore the *process* of scale up. With the fusion of the results, lessons learnt could be summarised and used to inform policy and future scale up, completing the operational research cycle. This conceptual framework upon which the thesis is based is illustrated graphically in figure 4 below and is based on the operational research model (see figure 1 section 1.2 above).

Figure 4: Conceptual framework based on operational research model



Qualitative and quantitative data processes were carried out simultaneously as seen in Table 3 below which outlines the PhD timeline from September 2000 to May 2007. Key Informant Interviews (KIIs) were conducted between March and May of 2004.

Table 3 PhD Timeline September 2000 to May 2007

Preparation	Field Research			Writing	
Development of research enquiry and tools	Quantitative Data			Final analysis	Write up
	Site establishment VCT data collection and analysis				
	Qualitative Data				
	Participant observation	K I I	Analysis		
Sept 2000	Mar 2001	Mar-May 2004	June 2005	July 2005	May 2007

4.2 Quantitative Methods

4.2.1 Quantitative data collection and quality

This thesis documents the progress of site scale up. Firstly through the establishment of a national VCT register, data on site openings and characteristics could be accessed readily. Secondly the client data from the all the VCT sites in Kenya supported by LVCT are examined for basic demographics, trends in access to sites and comparisons of rural and urban areas.

4.2.1.1 VCT site registration

The National VCT register¹⁶⁴ was used as the basis for the data on site registration presented in this thesis. In 2001 LVCT was instrumental in the establishment of a

national VCT register at NASCOP as agreed in early taskforce meetings (of which I was a member).

The first step was to establish a national coding system in close collaboration with the NASCOP Monitoring and Evaluation Officers assigned to VCT and the data department of the Centers for Disease Control (CDC), also involved in large-scale data collection on behalf of NASCOP. The coding system was intended to facilitate the future registration of sites and collection of data. Unique site code identifiers could in theory be issued to sites that incorporated a number representing the province, two numbers representing the district and a further three representing the sites. Thus Thika District Hospital would become 206001 with 2 =Central Province, 206 = Thika District and 001=District Hospital VCT site. The first number in the series was to be reserved for the government district hospital in each district and the remainder were to be given out in order of application regardless of whether the applicants were government institutions, NGOs or others. Changes to site codes were made by NASCOP during the study period to reflect political alterations to district boundaries. This affected Nairobi (which went from being one district to being 8 districts in 2005) and 6 districts in other provinces that were subdivided. Site codes changed by NASCOP during the study period were recoded in the LVCT database to reflect the initial code issued and allow accurate merging of the data.

As a formal system of application for inspection and qualification for site registration emerged, supporting paperwork was filed at the central coordination office. The LVCT team and author supervised both the updating of the register and filing of supporting documentation on a regular basis to ensure accuracy of the register with

regards to operation dates, inspection, deregistration and so on. Administrative, management and registration decisions as well as decisions to deregister were left to NASCOP, the VCT taskforce and the newly established Quality Assurance Team, to which LVCT provided the secretariat. The national register of sites was then updated in excel by NASCOP staff on a monthly basis. Updated registers were made available quarterly to taskforce members. Details of site registration dates and subsequent visits were entered retrospectively in early 2004 from paperwork stored haphazardly in boxes and files in NASCOP and prospectively thereafter.

Supplementary columns on the involvement and technical assistance from LVCT were added to the basic register. These additional data were used for programming and proposal-writing purposes at LVCT. They also allowed for assessment of the role of the NGO in catalysing national scale up and are presented in a case study of LVCT (see section 4.3 and chapter 7 below).

Maps of VCT site density were based on site registration dates entered in the register and population data from official government statistics¹⁴¹. Since official maps of Kenya pre-date the new political boundaries, data were combined from the relevant new districts to reflect boundaries in place at the start of the study. National prevalence data for HIV are far from complete with no information for many districts and limited information combined from the Kenya Demographic Health Survey (DHS)¹⁵⁷ and antenatal sero-surveillance for other districts. It was therefore not possible to make corresponding maps of site density compared with HIV prevalence.

4.2.1.2 LVCT client uptake April 2001 - June 2005

The operational research described in this thesis is set in 20 districts in 6 of the provinces of Kenya (see figure 6 in section 5.4 below), chosen largely due to their location in donor priority areas (Coast, Nairobi and Central provinces being US government priority areas and Nyanza being a UK government priority area). Client records from all 55 sites supported technically by Liverpool VCT were used for this thesis. The sites were a mixture of VCT centres in government facilities (27), private hospitals (2), NGOs (14) and CBOs (12). In total 20 were registered as stand-alone facilities.

Registered VCT sites had to complete a national VCT data form (see appendix E) for each client, which is filled out during the counselling process. Information on basic demographics as well as why clients came for testing, where they heard of the service and test results are recorded. The form has undergone a number of iterations as the national programme has progressed with questions being added and removed. These were kept to a minimum and changes were only made when necessary for programme development. Minimal changes that affected the database can be summarised as follows:

For ease of data analysis, variables on how clients had learnt of the service (mass media and other channels) and on their reasons for attending were changed in January 2002 to being recorded as a separate yes/no variable for each item (e.g. radio yes/no; here just to know status yes/no). An additional variable on rape was added in 2003 under reasons for attending. A number of variables not captured on the data form including facility location and information on whether a site was a CBO, a faith-

based organization or youth-friendly was added into the database retrospectively. In order to facilitate subsequent merging only variables with a complete data set have been included in the analysis.

The reporting panel was dynamic: some sites opened after the beginning of data collection and some (as part of the package of technical assistance offered by LVCT) were trained to take over their own data entry and report directly to NASCOP. Thus while the data set includes data from 55 sites, the maximum number of sites reporting was 49 sites in the year 2003 (average number reporting per year 36.5). All clients seen at the sites from April 2001 (or from the date of site opening, whichever came first) until the end of June 2005 (or until the date that the site began to enter its own data) were included. Data included are from 9% of the registered sites in Kenya, 17.5% of all registered stand-alone sites and an estimated 12 % of clients counselled nationally (based on government figures)¹⁶¹.

There were a number of in-built checks to ensure the quality of the data entered by counsellors into the National VCT data form. The form was designed to have easy tick boxes and all questions were pre-tested in an extensive pilot study involving over 5000 clients. I participated in the design and pre-testing of this form in 2000 – 2001 as well as in the development of the accompanying guidelines and training manual. Counsellors trained with the National VCT training manual¹¹ had their competency in data collection assessed as part of their initial qualification.

A number of questions and requests for clarification were raised by counsellors during the pilot phase and I drafted guidance notes to accompany the training on data

collection. An adapted version of these guidance notes were made available to future trainees as part of the nationally approved training to aid them when uncertainty arises. As NGO director I managed the data team directly for the first three years of the study and thereafter continued to have regular meetings with them. I supervised the cleaning of data, the monthly and quarterly analysis and the writing of donor reports. Data entry staff counter-checked the continuity of client code numbering in all submitted forms and made regular visits to sites if missing data were unexplained for any reason. Any data entry or programmatic anomalies were thus detected early and acted upon. An example of a change instituted was to ensure accuracy in collecting client data by verifying the number of forms on a monthly basis against the number of tests used and the on-site records.

4.2.2 Statistical Methods for quantitative data

Client records were entered into an Epi Info 2002 database and analysed in Epi Info, Access and/or SAS v9.1. National site registration data were entered in Excel and analysed in Excel and/or Epi Info 2002.

4.2.2.1 Methods used in analysis VCT site registration data

Simple descriptive statistics, by year of report, were used to analyse service provision (number of VCT sites) and coverage (geographical distribution).

4.2.2.2 Methods used in analysis of VCT client uptake

The statistical methods outlined below are summarised in three sections: methods used for description of the data; methods used for the analysis of trends in prevalence

ratios across time and methods used to assess the impact of events and interventions such as the four phase mass media campaign and the impact of test kit shortages.

Firstly simple descriptive statistics both by year and month (as data for 2001 and 2005 did not represent complete calendar years) of report were used to calculate the uptake of VCT and client characteristics. Twenty variables on the National VCT Data Form were considered. Variables such as client code, district code and mother's maiden name were used for data cleaning purposes. Two by two tables were used for comparison. 95% confidence intervals (CIs) are presented.

Log binomial regression analysis was used to evaluate trends in prevalence rates between 2001 and 2005. Each variable (presented in table 4, section 5.4 below) was considered against the selected baseline for comparison. Log-binomial regression-based prevalence ratios (PR) and confidence intervals (CI) were used to calculate the log relative risk as a coefficient and to allow for more accurate interpretation of trends¹⁷³. These were used instead of logistic regression as the odds ratios (ORs) provided by logistic regression are a poorer approximation of relative risk or prevalence ratios when the individual prevalence rates are greater than 0.1. All confidence intervals are 95% confidence intervals.

A multivariate Poisson regression model was used to determine how much of any observed increase in VCT utilization was related to the mass media campaign or how observed decreases were related to events such as test-kit stock outs¹⁷⁴. The Poisson model was used to account for potential confounders and to allow comparison of the observed values with those predicted by the model. As the number of sites was

increasing at the same time as the client flow, VCT clients per site per month were modelled and relevant variables in the national VCT data form (see table 4) were considered in the development of the model. The model used the natural logarithm of the number of sites reporting per month for an offset and accounted for over-dispersion (i.e. variation beyond that expected by the Poisson distribution) by using the square root of the ratio of the deviance to the degrees of freedom as a scale parameter. Changes in log-likelihood between successive models were used to modify the final model fit. To account for the trend in the changing number of sites over time, the final model presented is a function of the natural logarithm of the number of sites reporting per month (as an offset) and as a polynomial function of the reporting month number. Indicator variables accounting for the timing of the campaigns and of stock outs of test kits were included in this model. The coefficients of the indicator variables can be interpreted as the percent change in client load (per site per month) versus the baseline. All coefficients presented have 95% confidence intervals.

4.2.3 Ethics for quantitative data

Data reported were collected routinely for project management at all the participating VCT sites. No additional data for the purpose of this thesis were collected. Clients' details were anonymous and coded as in the National data form with corresponding client codes. Informed consent was obtained from clients as a routine part of the HIV testing process. The programme described in this thesis has been determined to be research not involving human subjects by the US Health and Human Services, Centers for Disease Control and Prevention because VCT data are anonymous and clients cannot be identified. Further ethical clearance was not sought for the quantitative analysis.

4.3 Qualitative methods

4.3.1 Qualitative data collection and the role of the observing participant

The process of scale up and policy formulation for VCT was explored through a number of qualitative research methodologies^{24;175-177}. Participant observation was used; diary notes and minutes of taskforce meetings and its subcommittees were reviewed. Key informant's views were elicited through the use of individual semi-structured in-depth interviews and a case study of one NGO (LVCT) was used to illustrate certain aspects and milestones of scale up.

As a participant and also observer, I documented and reflect upon the group interactions in the VCT taskforce. The roles of the individuals within the group, including my own perspective as a taskforce member, are examined reflexively to assess their influence on policy and in shaping strategies for VCT scale up.

Qualitative methods describe four associated types of researchers as participants or observers: the 'complete participant', 'complete observer', 'participant observer' and 'observer participant'¹⁷⁸. *'While for the participant observer the observation is the main data gathering method, which is usually complemented in the fieldwork by the use of other research techniques, for the observing participant active participation in the social life studied is virtually the only data gathering'*¹⁷⁹.

In reality there is considerable overlap or movement between these positions. For example I was taking part primarily as an observing participant, but in certain contexts I was more of an observer and in others more of a participant. In the task force meetings I was both observer and participant listening and participating in the

debates. Similarly in the key informant interviews I was both participant and observer shifting between these positions in the interactions and discussions with participants. In the evolution of LVCT as an organization (presented as a case study in thesis) I was the NGO Director, and from this position was more of a complete participant than an observer. In this case participant observation needs to be seen as a spectrum and my own role within the research cycle and creation of data acknowledged and made explicit. My close involvement with the research subject matter has both pros and cons. On the one hand my own involvement in the process arguably altered the dynamics of the key informant interviews. On the other hand my close 'insider' involvement allowed unique insights, which are -grounded in a reflexive approach. The strengths and weaknesses of this methodology are discussed further in sections 4.3.1.1 and 4.3.1.2 below.

4.3.1.1 Weaknesses of the participant observer methodology

My role in the taskforce and in VCT scale up may have posed dilemmas for interviewees reluctant to criticise (either directly or indirectly) what they perceive to be my views. Alternatively individuals could be more likely to bring up contentious areas that they know me to be interested in, such as quality assurance, because my presence as the interviewer brings this to the forefront of their mind or because they were eager to please during the interview. The interviews were conducted after several years of scale up and issues that were once contentious may be missed out of interviews altogether in favour of recent events.

Awareness of the difficulties, dilemmas and potential biases meant that steps could be taken to mitigate against them. The interviews (described in section 4.3.1.4 below)

bring in other voices than my own, interview questions were open questions and prefaced by an explanation of informed consent and confidentiality. The resultant analyses were sent to interviewees for comments and insights (for more details on this ‘participant checking’ see section on ethics 4.3.5). Data were also discussed and read by at least two qualitative researchers who had not participated in the VCT scale up process.

Further weight is given to the data from participant observation through triangulation with interviews and with independent sources, including minuted notes of meetings. This was particularly relevant to issues early in the scale up process (such as the contentious development of the training manual see section 6.2.2 below) that featured less prominently in interviews than recent events (such as the media debate on who should conduct HIV testing (see section 3.5.4 above and 6.3.5 below).

4.3.1.2 Strengths of the participant observer methodology

Rather than see participant observation as a weakness in this thesis the research methods and my close involvement are arguably a source of credibility. Speculations and self-reflections were made from a position of close involvement in the process: providing unique insight into the journey of scale up over time: - key moments, tensions, different players, challenges and how they were overcome. The use of participant observation in this manner thus was able to provide additional perspectives that increase the trustworthiness of the data.

4.3.1.3 Data collection through participant observation and personal reflection

During the period between January 2001 and July 2004, twenty-one VCT committee

meetings, 18 meetings of the guidelines subcommittee and 26 of the training subcommittee took place. Both of these subcommittees ceased to exist after their main documents were produced and were replaced in 2003 by monthly meetings of the National Quality Assurance Team (NQAT). The NQAT acted as a new subcommittee of the taskforce and reported back to it. A total of 53 sets of minutes, with matching diary notes were reviewed (see Appendix K). I was a member of the VCT taskforce from its inception until mid 2004 and attended all but four of these meetings. Notes and minutes of taskforce meetings between September 2000 and July 2004 were reviewed for insights into the scale up process. Consideration was given to the interaction of the individuals as well as the formation and development of the group. Keeping a diary proved to be a central activity to the research process. It recorded observation notes from training, meetings, interviews and other thoughts noted down during the day. The results from the key informant interviews, minutes and diary notes were merged during the analysis process (see sample framework, appendix I) and are referenced individually in the text of the qualitative results.

4.3.1.4 Data collection through the use of in-depth interviews with key informants

The use of key informant interviews (KIIs) allowed the interviewer to respond flexibly to issues arising and to provide space for participants to explore and discuss their experiences of VCT scale up and to further explore themes and issues arising from the participant observation¹⁸⁰.

Interview participants (all key stakeholders in the VCT scale up process) were recruited by me through requests under ‘any other business’ at meetings of the VCT taskforce (*diary notes December and January 2004*). Interviewees were only recruited

following informed consent on the understanding that there was no undue pressure to participate or answer questions. Purposive sampling¹⁸¹ was employed, using the members of the National VCT taskforce and key implementers as a starting point. Participants were chosen based on sex, experience and location. The policy makers and implementers interviewed varied from those with direct first hand experiences establishing VCT programmes to technical advisors, donors and Ministry of Health (MoH) officials. Not all were permanent members of the taskforce but the majority had attended at least one meeting and all were able to provide information on the process of scale up from different personal and institutional perspectives.

The interviews were conducted between 18th March and 4th May 2004, in Nairobi, Kenya. The interview guide (Appendix F) included open questions on participant's views on VCT scale up: successes and challenges, their views on the mass media campaigns and on the controversy surrounding who conducts HIV testing. Finally participants were asked for their recommendations with hindsight on what might have been done differently/better. Interviews were conducted in English by the principal investigator, trained in the conduction of such interviews and all interviews were audio-taped as well as concomitant notes being taken. Same-day transcriptions were done from the tapes and accompanying notes. A total of 22 interviews were carried out among the two participant groups: 14 participants were VCT taskforce members and 8 were not (but 6 of these had attended as observers or advisors).

4.3.1.5 Qualitative data collection through a case study

The use of an individual institution as a case study¹⁸² allowed for a more detailed exploration of the impact of the role of LVCT (in specific) on VCT scale up in Kenya

through an analysis of methods used by LVCT in influencing scale up. Unlike research specifically focused on the use of case studies to inform scale up of HIV services¹⁶ or national policy in Kenya¹⁸³, the use of an individual case study¹⁸² like this is only able to draw limited inferences on the impact of NGOs (in general) on scale up¹⁸⁴. However, even through the use of one case study, it is possible to forge links between the ‘micro’ level of a single case and the ‘macro’ level¹⁸⁵ that help in understanding the development of more complex national systems. Data for the case study were generated from diary notes, minutes of LVCT management meetings, critical reflection and discussion with staff and external consultants as well as secondary data (LVCT donor reports and international presentations)¹⁸⁶ and LVCT publications^{86;114;167;187;188}. In order to understand the analysis, further background on the methods employed by LVCT is presented in what follows.

LVCT directly influenced VCT scale up through technical assistance and careful documentation of this was undertaken prospectively. LVCT currently offers a range of technical assistance services. In a minority of donor-funded stand-alone sites staff *salaries* are paid directly through an NGO. The administrative structures built up were later seen as an opportunity to provide technical assistance and capacity building to donor-selected CBOs by paying salaries through NGO administrative structures to CBO staff providing VCT. The majority of sites supported in the early years of scale up were government sites and offered an intense package of technical assistance alongside a long-term exit strategy (for sustainability and ownership reasons). This full package included four key elements: data entry, training, supervision and quality assurance. Each is described in more detail below.

As part of its support to *data entry*, sites remitted National VCT client data forms to LVCT offices for entry by trained NGO staff into its main database. All LVCT stand-alone sites, all partner CBO sites plus a number of government sites opening in 2001–2004 have remitted data to LVCT. While the stand-alone sites will continue to do so the government and CBO sites are trained to take this over as time progresses.

VCT *counsellor training* has been a cornerstone of the LVCT's approach. The national training manual for VCT, described in more detail in section 6.3.1 below, was edited and piloted by the NGO¹¹. LVCT remains one of four recognised training institutions and accompanies the 120-hour national training package with a written exam, competency assessments in data entry and rapid testing as well as a mandatory period of observed practice. The quality of training at LVCT has come to be well regarded and to my knowledge, it is the only training institution of VCT counsellors to have such robust competency assessments included in its terminal examinations – a situation that was previously unusual in a setting where training was regarded as a perk.

The basic package for VCT *counsellor supervision* offered by LVCT was based on models of counsellor supervision that provide VCT counsellors with support, counselling and refresher training¹⁸⁹. It deliberately left issues of personnel management, fault-finding and discipline to counsellor's line managers (in most cases government 'in-charges' or CBO managers). LVCT aimed to provide supervision through a combination of individual access to senior counsellors and formal fortnightly group meetings with trained counsellor supervisors. Supervisors focused on the prevention of burn-out through the creation of an intimate atmosphere in a

closed and confidential group, which contracted to meet for a finite number of sessions. Client and counsellor issues could be openly discussed and additional support offered to HIV positive counsellors. Line managers agreed to release staff from counselling duties. The supervisors for the stand-alone sites were LVCT staff and for government sites were drawn from the districts. A comprehensive supervision training programme was provided to experienced VCT counsellor supervisors selected by participating government districts.

4.3.2 *Quality assurance system*

The comprehensive **quality assurance** package developed and offered by LVCT is outlined in detail in its QA training manual⁸⁶. In addition to the training and supervision outlined above and the participation in a national registration system, facilities are trained in how to conduct, analyse and act upon client exit interviews and counsellor self reflection forms as well as accurate reporting of aggregated monthly data from on-site records. The development of this package is described in more detail in the case study presented in chapter 7 of the results.

The intensity or level of TA given to each site in the national register was recorded, allowing a picture of the support given to each site, district and province to be built up over time. Levels 1 and 2 were classed as ‘advice on VCT’ and levels 3-5 being input that was of sufficient intensity to influence the style, delivery and quality of the VCT services provided.

Levels of technical assistance offered to VCT sites:

- Level 1: any one of training, supervision and quality assurance
- Level 2: any two of training, supervision and quality assurance
- Level 3: training, supervision, quality assurance
- Level 4: data entry, training, supervision, quality assurance
- Level 5: salary, data entry, training, supervision, quality assurance

LVCT also set out to influence scale up indirectly through influencing national and international policy on VCT and HIV testing. Contributions to the national taskforce, national guidelines, national training documents and national quality assurance systems were all documented^{10;11;86} and are presented in chapter 7 below. The contribution of pilot studies and operational research are reviewed on a study-by-study basis in the same section.

4.3.2 Qualitative data analysis

As shown in the PhD timeline (table 3 above) data analysis was a continuous process¹⁹⁰ allowing issues, which emerged from an interview to be included in subsequent interviews and issues from participant observation to be included in the interview guide. Once the interviews, minutes and notes were complete, the data were analysed more formally. An initial familiarisation with the data was undertaken by reading and rereading selections of minutes, diary entries and selected interviews (from each of the groups represented on the taskforce). This allowed key emerging themes to be identified. The identification of key themes and sub-themes fed into the development of a spider diagram of overlapping interconnections (Appendix H) from which emerging themes were then indexed and categorised. The final version of the index may be found in appendix G. These were then structured into a ‘thematic framework’, which was systematically applied to sort the data¹⁹¹. Chart subheadings integrated themes from interviews with those from participant observations and diary and notes enabling cross connections to be made (see Appendix I). This ‘charting’ process enabled me to understand and interpret connections in the data and to recognise patterns of association – in other words when similar themes keep recurring in connection with each other. An example of this was the recurring link of poor

quality VCT to rapidity of scale up. The combination of participant observation, minutes review, diary notes and key informant interviews means that other voices apart from my own are heard. These analytical themes form the basis of the way the results are laid out in chapter 6 (summarized in table 6 at the beginning of that section).

4.3.3 Quality Assurance of qualitative data

A variety of quality assurance mechanisms¹⁹² were employed to assure trustworthiness and transparency of the individual key informant interviews. Pre-testing of the interview guide ensured that it generated the depth, scope and clarity of data sought. Interviewees were assured of confidentiality and of their voluntary participation in the study. They were sent copies of all final documentation produced in this thesis to review and confirm that it reflected a true representation of their views. Interviews were audio-taped and transcribed on the day of the interview by the principal investigator. All interviews were conducted and transcribed by the principle investigator. Transcripts were triangulated with notes taken during the interviews and with participant observation as well as minutes of meetings and diary notes.

4.3.4 Ethical Considerations for qualitative data

Full ethical approval for the study was granted by the Liverpool School of Tropical Medicine (LSTM) Ethics Committee (ref Number: 03.62) prior to commencement of the study. Informed consent was obtained from interviewees at the beginning of the interview. Information was given to participants about the project purpose, type of questions to be asked and, possible negative consequences. No inducements, transport fares or incentives were given to participants. Participants' details were anonymous

and coded in order to protect confidentiality and privacy. However the gender and position of participants means that many would be able to recognise not only their own inputs but also those of fellow members of the VCT taskforce.

Wherever possible (given the time delay between the interviews and writing up) the final results were sent to participants both for feedback and to ensure that they felt comfortable with the ways their views had been portrayed in the text, thus ensuring another level of quality in the qualitative results. Feedback was received from fourteen of twenty two interviewees (a number were no longer contactable and one had since died), which indicated that they were happy with the way they were identified and portrayed. CDC representatives highlighted how their conflicting roles of TA and donor might affect the interpretation of the paper, preferring to be seen as implementers and technical advisors. However, since other interviewees were unable to make this distinction when referring to 'donors' the term donor has been retained for the purposes of this thesis. CDC both funded VCT scale up and asked for financial and programme reports from funded partners. None of the feedback received from interviewees had any substantial influence on the writing of the thesis.

Chapter 5

Quantitative Results

5.1 Introduction: VCT coverage and patterns of VCT uptake

The key quantitative results are summarised in figures, tables and text in this chapter. Data from the national databases and registers are summarised to document VCT coverage in from 2001 to June 2005. An analysis of client flow and characteristics, access patterns of VCT site use and the impact of the mass media campaigns is then presented using VCT client data from 124,362 clients collected at 55 LVCT sites from 20 districts in 6 of the provinces in Kenya.

5.2 The impact of the VCT site registration system and the establishment of the national register

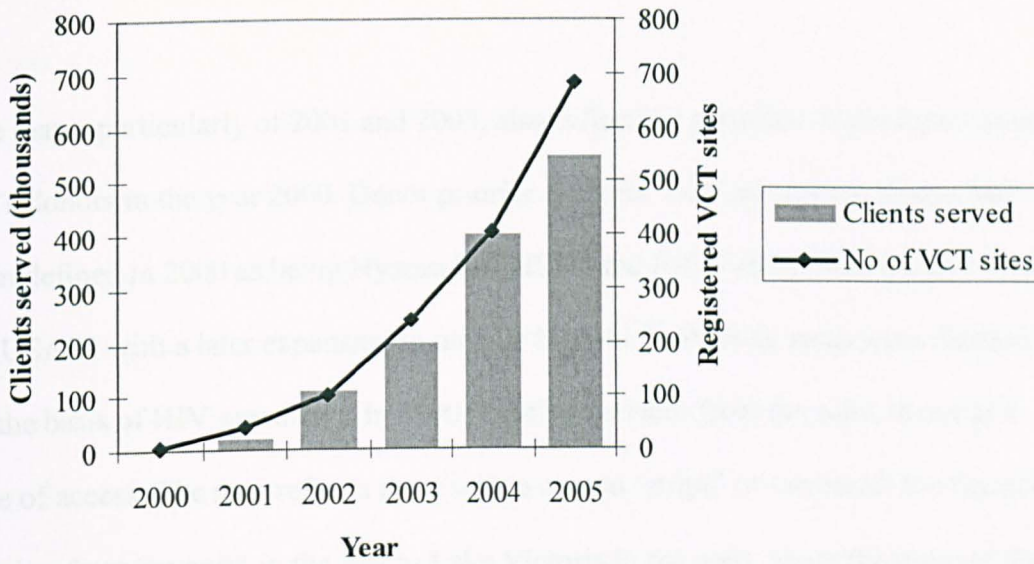
As a result of the early establishment of the VCT register, facilitated by LVCT, Kenya was unique amongst countries in the region in being able to link registration and use of free government-procured test kits with basic quality standards and data management. To my knowledge, Kenya is the only country with such a system established at the outset of VCT scale up. The register enabled NASCOP to have an accurate picture of existing sites, to enforce the national guidelines, to ensure uniformity of training standards and to build a comprehensive quality assurance system for VCT, described in more detail in the case study below.

The national system of individual site codes described in the methods (section 4.2.1 above) proved robust with easy identification of province and district, facilitating registration and reporting as well as minimising the potential for unregistered outlets to exist in Kenya. However, the changes to site codes made by NASCOP during the study period were confusing and are indicative of a larger problem with the national-

level management of VCT data. Furthermore, only aggregated data from sites was required at national level. The majority of national data forms from government sites remained at the sites and were never entered into a computer system, thereby limiting the potential for analysis of the larger NASCOP database and for more detailed monitoring and evaluation. Exceptions to this pattern were primarily seen where donor reporting or researcher requirements (such as LVCT, CDC main office, FHI supported sites and the University of Nairobi) had led to the establishment of data entry systems.

During the study period 585 sites were registered, three of which were already functional in early 2001⁸. The rate of site opening rose from an average of 10 sites per quarter in 2001 to 75 sites per quarter by the end of 2005, with 75% of sites being registered in health facilities¹⁶⁴. Figure 5 below, calculated from the NASCOP VCT site register and the available NASCOP VCT data¹⁶¹, shows a close relationship between the number of registered sites¹⁶⁴ and the estimated number of clients seen nationally. While site registration data are accurate, the data available on client numbers, gender and HIV status in the NASCOP registers were updated retrospectively¹⁸⁸ and are published as estimates in government documents¹⁶¹.

Figure 5: Increase in VCT sites and clients served in Kenya 2000 to 2005



5.3 VCT coverage in Kenya

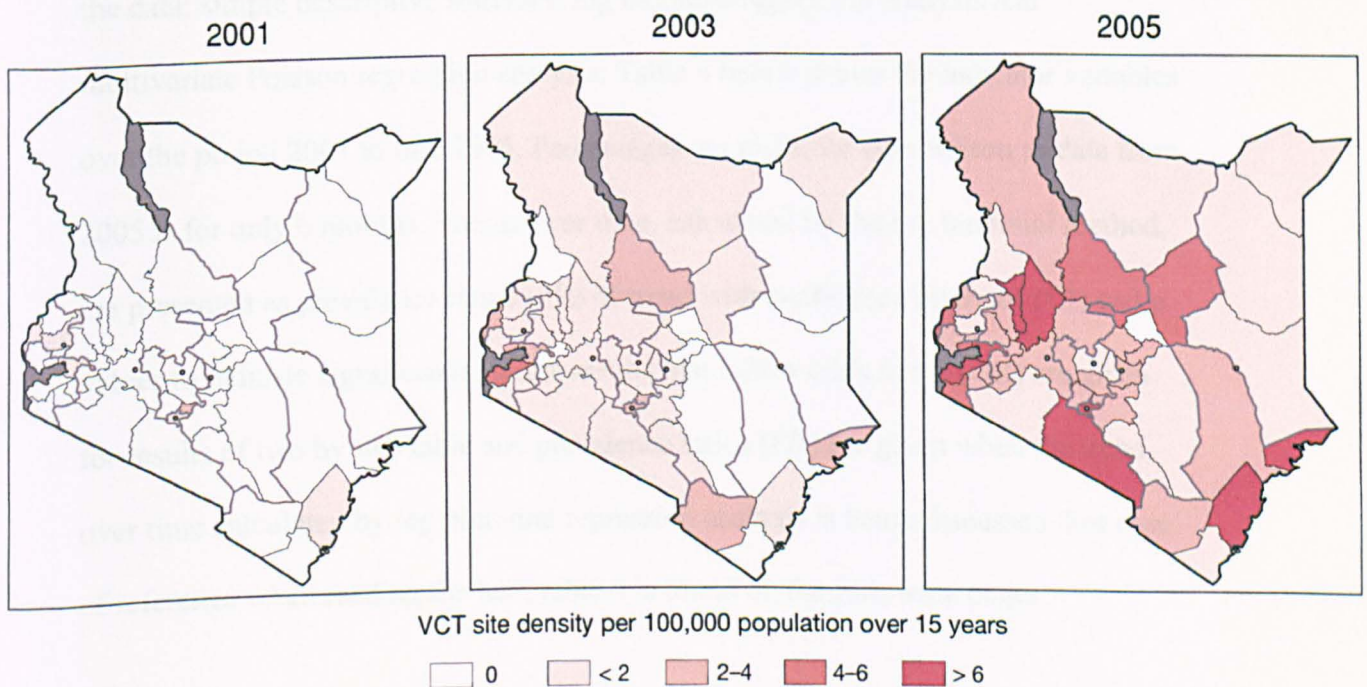
The increase in VCT site coverage per person aged over 15 is shown in figure 6 below. Details of the three maps are found in appendix D. A rapid increase in site density is seen within the timeframe of the study (April 2001 to June 2005) and by 2005, sites had been opened in every province and all of the districts in Kenya. The figure highlights poor coverage in the northern two-thirds of Kenya, remote areas that are sparsely populated and have a low HIV burden. It also shows a high density of VCT sites per 100,000 of the population in urban areas of Nairobi, in the centre of the country, Kisumu, at Lake Victoria in the west, and Mombasa at the coast.

Although there is an increased density of sites in urban areas this does not necessarily reflect HIV prevalence rates. For example Nairobi, with an HIV prevalence of 11% in 2003, had (and continues to have) twice as many sites per person as rural areas in Nyanza with estimated prevalence of 20-30% at that same time¹⁵⁷. Other examples of

urban over-provision include Nakuru, Mombasa and Malindi. Reliable national data for HIV prevalence in 2005 are not yet available.

The maps, particularly of 2001 and 2003, also reflect the priorities of the three major VCT donors in the year 2000. Donor priority areas for VCT services in Kenya had been defined in 2000 as being Nyanza for DfID⁴⁰ and Rift Valley, Western and Coast for USAID with a later expansion to include Nairobi¹⁵³. Priority areas were decided on the basis of HIV prevalence in 2000, existing services from the same donor and ease of access. The map reflects these with a central ‘stripe’ of increased site density running from the coast in the east to Lake Victoria in the west, along the route of the East African Highway linking the coast to Central Africa and beyond – an early area of high HIV prevalence². In addition, US CDC continued to support the direct implementation of VCT through mobile services, CBOs, youth groups and faith-based organizations without limitation to a specific geographical area.

Figure 6: Increasing VCT site density in Kenya (per 100,000 population aged over 15)



By 2005 certain anomalies begin to stand out. Certain remote districts (see accompanying map in figure 7 below for where this is) with low HIV prevalence, such as Kajiado and Baringo in Rift Valley Province have a high number of VCT sites whereas others such as Siaya, Nyamira and Bomet in Nyanza and Kakamega in Western Province continue to have a very low site density despite much higher HIV prevalence rates. Site density in Nairobi continues to be the highest in the country despite easy geographical and social accessibility to sites. These emerging patterns appear to reflect an ad hoc approach to the planning of scale up that is explored further in the qualitative results and discussion sections.

5.4 VCT client flow at LVCT supported sites April 2001- June 2005

The operational research conducted by LVCT and described in subsequent sections of this thesis is set in 20 districts in 6 of the provinces of Kenya (figure 6). The selection of sites and districts is described in more detail in section 4.2.1 (ii) above.

Three statistical methods (described in detail in section 4.2.2) were used to analyse the data: simple descriptive statistics, log binomial regression analysis and multivariate Poisson regression analysis. Table 4 below shows the indicator variables over the period 2001 to mid 2005. Percentages are given for comparison as data from 2005 is for only 6 months. Trends over time, calculated by the log binomial method, are presented as prevalence ratios (PR) of trend with confidence intervals (CI) and p values to indicate significance. In the results that follow odds ratios (OR) are given for results of two by two table and prevalence ratios (PR) are given when the trend over time calculated by log binomial regression analysis is being discussed. For ease of reference when reading the text, table 4 is found on the following pages.

Figure 7: LVCT operational research districts 2001 - 2005

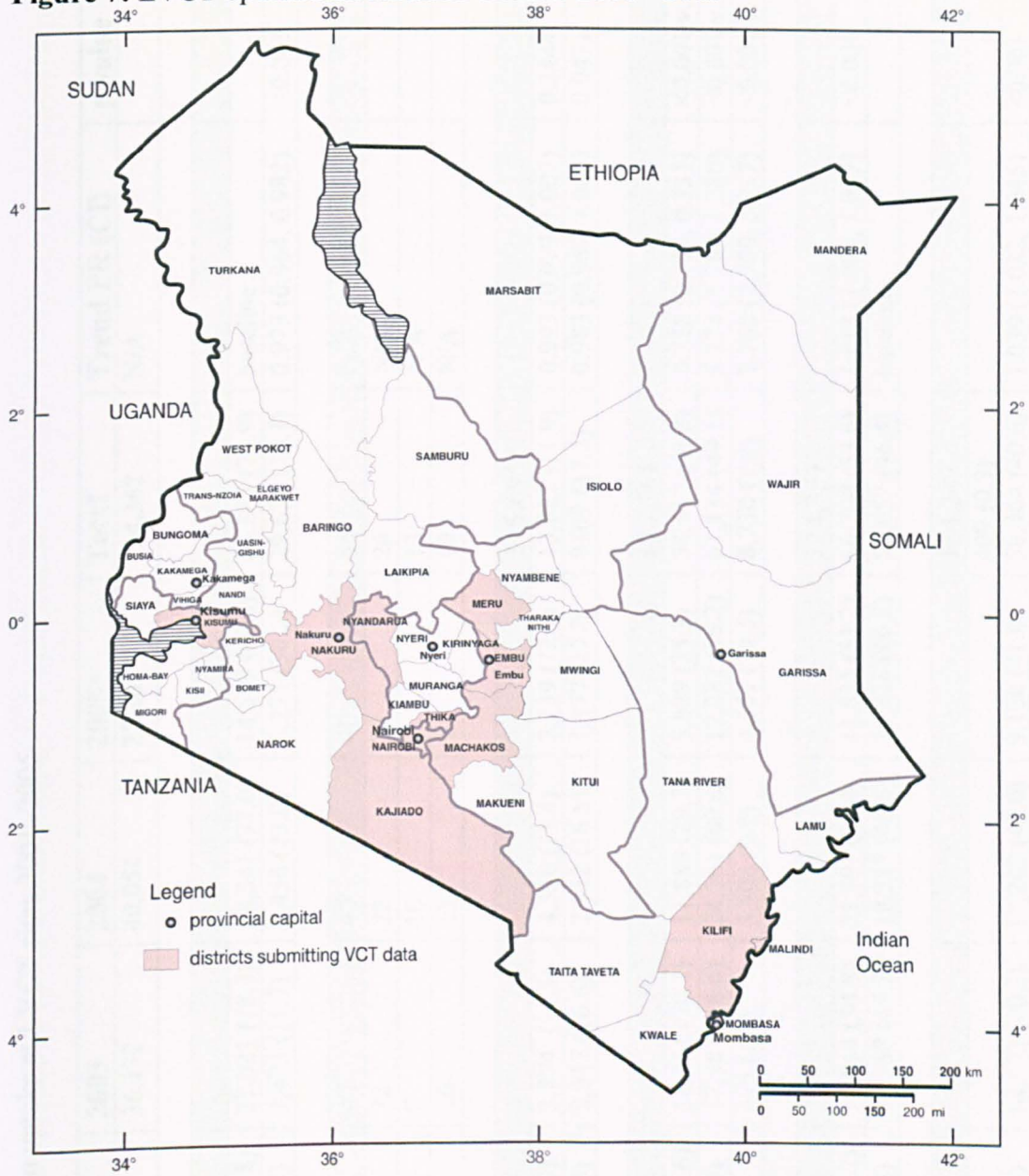


Table 4: Indicator variables showing trends in uptake at LVCT sites 2001–2005

Variable	2001	2002	2003	2004	2005*	Total	Trend PR (CI)	p value
Number of clients	6,399	19,474	36,172	40,054	22,263	124,362	N/A	
Facility Location								
urban client (%)	3,469 (54.4)	14,947 (76.8)	27,021 (78.3)	28,341 (77.0)	14,509 (69.8)	88,287 (74.9)	baseline	
rural clients (%)	2,907 (45.6)	4,527 (23.3)	7,473 (21.7)	8,456 (23.0)	6,271 (30.2)	29,634 (25.1)	0.973 (0.964, 0.982)	<0.001
Sites reporting data	22	30	47	45	40	55	N/A	
rural location	14	15	22	22	22	26	N/A	
municipality	5	5	9	10	7	13	N/A	
city	3	10	16	13	11	16	N/A	
HIV tested						115,696		
HIV + (prevalence)	820 (15.1)	2,059 (11.9)	3,874 (11.5)	4,330 (11.4)	2,739 (12.9)	13,822 (11.9)	0.993 (0.979, 1.007)	0.3444
Female + (prevalence)	579 (21.1)	1,424 (17.3)	2,517 (16.6)	2,812 (16.5)	1,777 (17.7)	9109 (17.2)	0.983 (0.967, 1.000)	0.0471
Client by Site Type						124,361		
Integrated (%)	5,326 (83.2)	13,559 (69.6)	18,114 (50.1)	11,889 (29.7)	5,629 (25.3)	54,517 (43.8)	0.728 (0.725, 0.731)	<0.001 v. all other
Standalone (%)	1,073 (16.8)	5,915 (30.4)	17,583 (48.6)	24,261 (60.6)	12,282 (55.2)	61,114 (49.1)	1.274 (1.268, 1.280)	<0.001 v. integrate
Mobile (%)	0 (0)	0 (0)	475 (1.3)	3,904 (9.8)	4,351 (19.5)	8,730 (7.0)	2.765 (2.700, 2.837)	<0.001 v. integrate
Gender						124,357		
Male (%)	3,096 (48.4)	10,158 (52.2)	19,814 (54.8)	21,797 (54.4)	11,835 (53.2)	66,700 (53.6)	1.013 (1.008, 1.017)	<0.001
Female (%)	3,299 (51.6)	9,315 (47.8)	16,358 (45.2)	18,257 (45.6)	10,428 (46.8)	57,657 (46.4)	baseline	
Age						124,342		
<15						409 (0.3)		
15-24 (%)	2,271 (35.5)	7,299 (37.5)	14,572 (40.3)	17,202 (43.0)	9,120 (41.0)	50,464 (40.6)	1.039 (1.032, 1.045)	<0.001

25-90 (%)	4,095 (64.0)	12,125 (62.3)	21,512 (59.5)	22,636 (56.5)	13,101 (58.8)	73,469 (59.1)	baseline	
Marital Status						124,362		
Not married (%)	2,682 (41.9)	7,420 (38.1)	15,955 (44.1)	17,743 (44.3)	8,884 (39.9)	52,684 (42.4)	1.008 (1.003, 1.014)	<0.001
Type of Service						124,166		
Full VCT (%)	5,445 (85.1)	17,523 (90.0)	33,972 (94.3)	38,232 (95.5)	21,443 (96.5)	116,615(93.9)	1.022 (1.021, 1.023)	<0.001 v. all others
Information (%)	952 (14.9)	626 (3.2)	602 (1.7)	581 (1.5)	194 (0.9)	2,955 (2.4)	0.473 (0.458, 0.488)	<0.001 v. 'full'
Counselling (%)	0 (0)	1,323 (6.8)	1,462 (4.1)	1,240 (3.1)	571 (2.6)	4,596 (3.7)	0.706 (0.686, 0.727)	<0.001 v. 'full'
Session Type						124,210		
Individual (%)	5,556 (86.8)	15,918 (81.7)	28,958 (80.1)	30,604 (76.4)	17,076 (76.7)	98,112 (78.9)	0.970 (0.968, 0.972)	<0.001 v. all
Couple (%)	711 (11.1)	2,655 (13.6)	4,819 (13.3)	5,553 (13.9)	3,164 (14.2)	16,902 (13.6)	1.055 (1.041, 1.068 0	P<.001 v. 'indiv'
Group (%)	116 (1.8)	900 (4.6)	2,390 (6.6)	3,791 (9.5)	1,999 (9.0)	9,196 (7.4)	1.301 (1.277, 1.326)	<.001 v. 'indiv'
Reasons given ** (%)	5,295					123,258		
Feel unwell (%)	673 (12.7)	1848 (12.1)	2748 (7.9)	2883 (7.4)	1835 (8.4)	9,987 (8.1)	0.892 (0.874, 0.911)	<0.001
Know status (%)	2,944 (55.6)	10,613 (54.5)	28,109 (77.7)	33,307 (83.2)	19,083 (85.7)	94,056 (76.3)	1.059 (1.056, 1.062)	<0.001
Client risk (%)	422 (8.0)	-	3,916 (10.8)	4,327 (10.8)	2,672 (12.0)	11,337 (9.2)	1.040 (1.016, 1.064)	<0.001
Partner risk (%)	516 (9.7)	1,597 (8.2)	3,285 (9.1)	3,171 (7.9)	1,826 (8.2)	10,395 (8.4)	0.913 (0.896, 0.932)	<0.001
How Learned? **	4,179					122,142		
TV (%)	239 (5.7)	3,281 (16.8)	11,161 (30.9)	12,625 (31.5)	6,078 (27.3)	33,384 (27.3)	1.088 (1.077, 1.097)	<0.001
Radio (%)	1,625 (38.9)	7,324 (40.7)	16,378 (46.5)	18,741 (48.2)	9,257 (42.6)	53,325 (43.6)	1.014 (1.008, 1.021)	<0.001
Newspaper (%)	168 (4.0)	3,325 (16.6)	9,165 (25.3)	10,420 (26.0)	4,742 (21.3)	27,820 (22.8)	1.042 (1.031, 1.053)	<0.001
Poster (%)	1,116 (26.7)	6,646 (34.1)	17,954 (49.6)	19,800 (49.4)	10,420 (46.8)	55,936 (45.8)	1.056 (1.049, 1.062)	<0.001
Friend/Relat (%)	1,935 (46.3)	3,794 (19.5)	9,137 (25.3)	11,081 (27.7)	5,130 (23.0)	31,077 (25.4)	1.052 (1.042, 1.063)	<.001
Health Work (%)	2,199 (52.6)	3,416 (17.5)	6,072 (16.8)	5,147 (12.9)	2,461 (11.1)	19,215 (15.7)	0.831 (0.819,0.842)	<0.001

* data for 2005 are for 6 months only

** can check many responses; each choice a separate yes/no variable after 2002

The following sections (5.4.1 – 6) present the results grouped in themes: overall VCT utilization and service provision, uptake by certain population groups (youth, gender and couples), uptake by service modality and location and uptake by HIV prevalence and symptoms. In each of these the results of simple descriptive statistical analysis are combined with the results of the log-binomial regression (trends over time). The section ends (5.4.7) with the data on the impact of demand creation for VCT and includes the results of the Poisson regression model of the impact of the mass media campaigns.

5.4.1 Overall VCT utilization and provision

In total 124,362 client records were analysed from 55 sites. There was a significant increase both in the utilization of VCT services and in the number of sites reporting VCT client data over time (figures 8 and 9). Variation in sites reporting reflects hand-over of data management and reporting to government structures in certain sites. Data from 9 sites in July 2002 are missing from the database. Around 5% (5681/124,362) stated that they had been tested previously, with 2936 stating that they were coming to confirm a previous positive result.

Figure 8: Total number of VCT clients reporting per month; April 2001 – June 2005

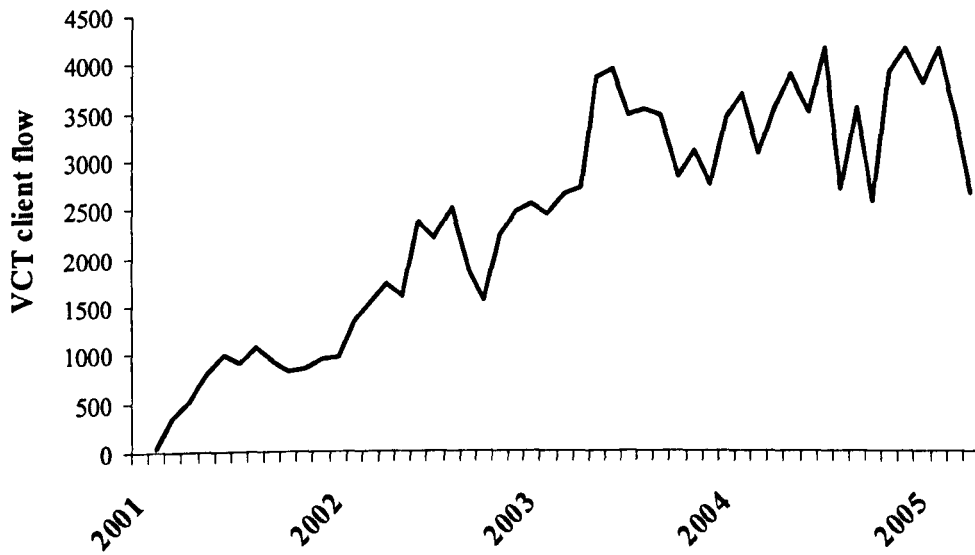
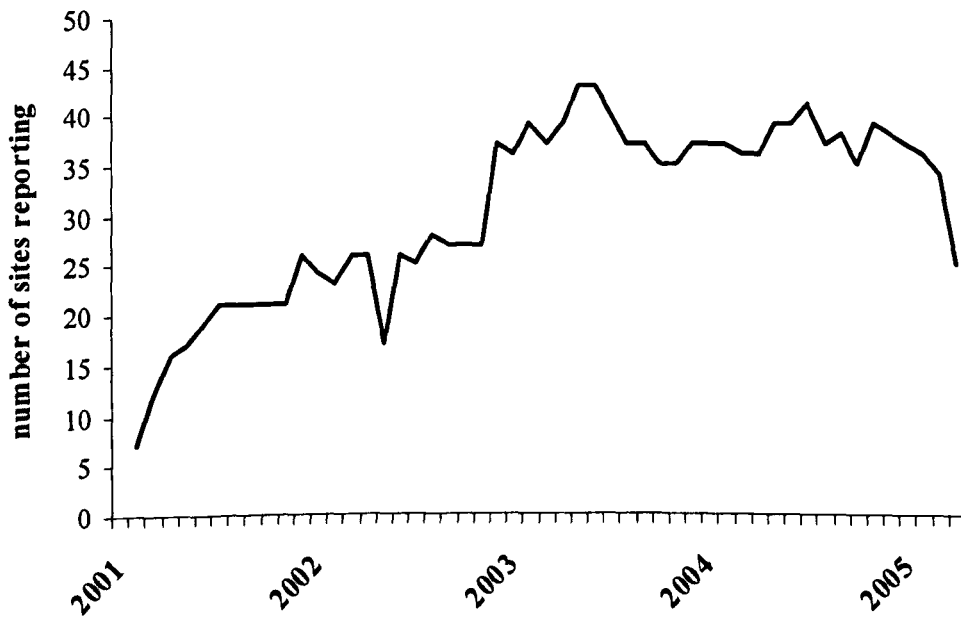


Figure 9: Total number of VCT sites reporting per month; April 2001 – June 2005



The data reveal an increase over the timeframe of the study in the proportion of clients requesting a ‘full’ VCT service that incorporates rapid HIV testing. In 2001 85% requested full VCT with 15% attending for ‘information only’. By comparison in

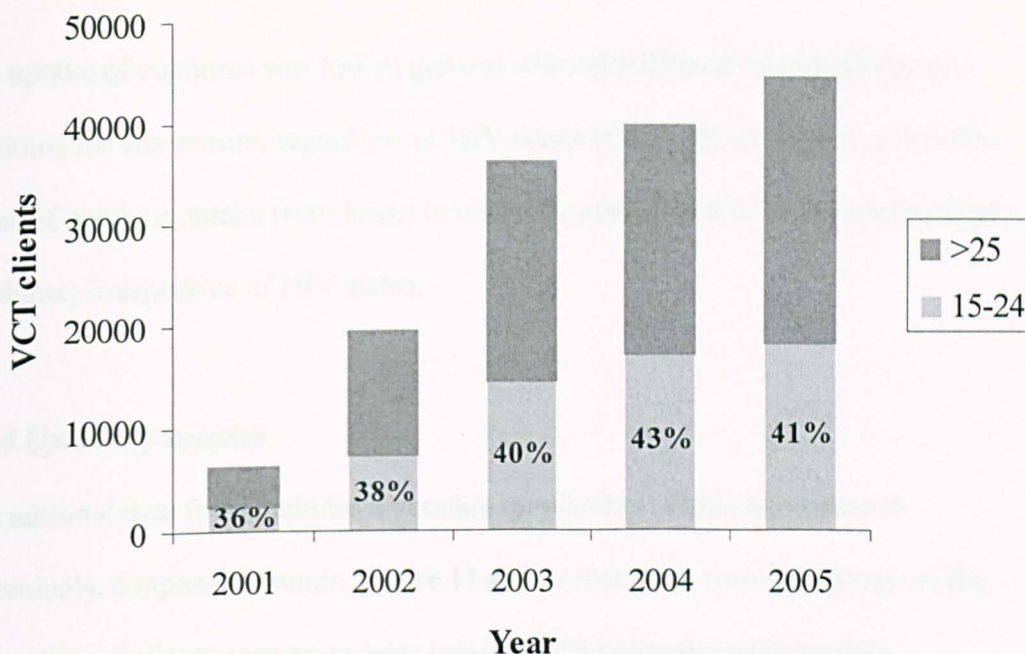
2005 this had increased to 96% of clients attending for ‘full VCT’, 3% for ‘counselling only’ and 1% for information only (PR 1.02; CI 1.021, 1.023; $p < 0.001$).

5.4.2 Uptake by youth

The uptake of VCT among young people aged 15-25 (an age range in line with GoK documents on youth)⁹ compared to other age groups also increased in the study period (PR 1.04, CI 1.032- 1.045, $p < 0.001$), and is presented graphically in figure 10 below. The uptake by youth was most marked in rural areas as opposed to urban areas (OR 1.34; CI 1.31, 1.38; $p < 0.001$) and greater in stand-alone and mobile facilities (OR 1.2; CI 1.18, 1.23; $p < 0.001$) than in health facilities. Stand-alone sites attracted youth in urban areas and mobile services attracted youth in rural areas. Male and female youth accessed services in almost equal numbers (25,472 females versus 24,990 males), a finding that was significantly different to the over-25s who were less likely to be female (OR 0.75; CI 0.74, 0.77; $p < 0.001$). A gender-disaggregated analysis is presented in section 5.4.3 below.

Two ‘youth-friendly’ sites (that attempt to remove barriers and help reach young people with the health services they need)¹⁹³ submitted data from 11,396 clients to LVCT and these indicate that youth are more likely to attend these sites than those that do not have a specific youth-orientated outlook (OR 1.12, CI 1.08-1.16, $p < 0.001$).

Figure 10: Total youth aged 15-24 requesting services (data for second half of 2005 are projected)



5.4.3 Analysis by gender

While both male and female youth accessed VCT in almost equal numbers this was not true for men and women over 25 (31,898 female versus 41,569 male).

Furthermore, these differences in uptake between men and women increase over time.

Table 4 above shows a significant trend over time between 2001 and 2005 for more men (and therefore fewer women) to attend VCT sites (PR 1.013, CI = 1.008-1.017, $p < 0.001$).

The greatest gender disparity was found in marital status with married men in the data significantly less likely to come forward for testing than their unmarried male counterparts (OR 0.67; CI 0.63,0.68, $p < 0.001$). While married women were as likely

to attend as their unmarried female or male counterparts, they were far more likely to test HIV positive than unmarried women (OR 3.1; CI 2.9,3.2; p<0.001).

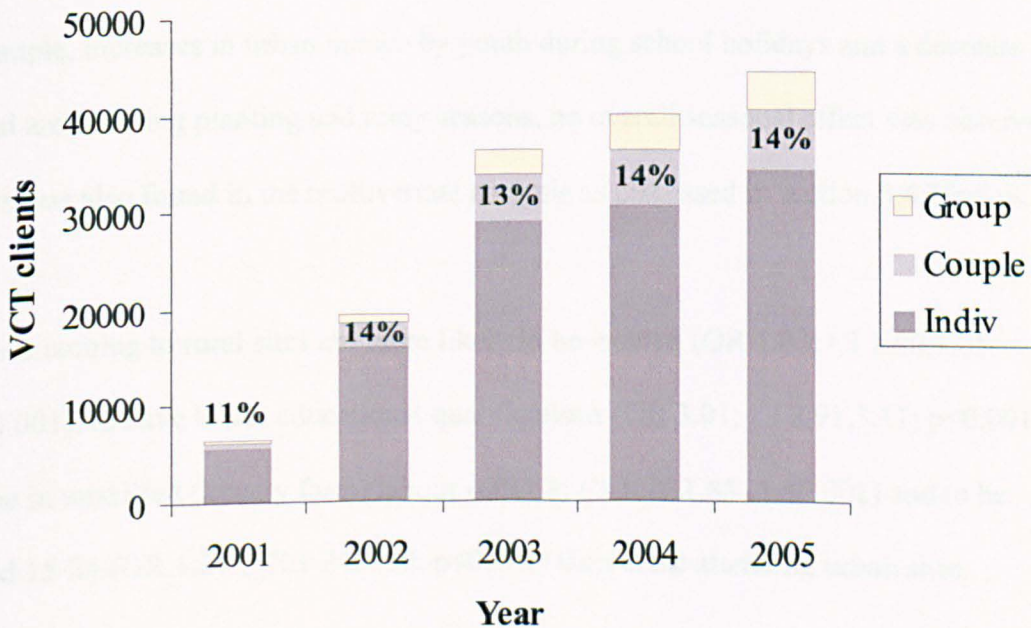
The uptake of condoms was low in general with only 23% of clients taking any condoms for any reason, regardless of HIV status (OR 1.05; CI 1.0-1.1, p = 0.03). Rates of condom uptake were lower in married clients (44% of those who took up condoms) irrespective of HIV status.

5.4.4 Uptake by couples

The national data form includes a variable on whether clients were seen as individuals, couples or groups. Figure 11 shows that there was no increase in the proportion of clients seen as couples (around 14%) over the study period.

Figure 11: Uptake of VCT by session type 2001-2005

(data for second half of 2005 are projected)



5.4.5 Uptake by service location and modality

In total 61,114 clients (49%) were seen in the 20 stand-alone sites reporting data, 12 of which were located in Nairobi. A further 54,517 (44%) were seen in the 35 health facilities and the remainder through outreach services (see table 4). Sites in all locations were a mixture of government facilities (27), private hospitals (2), NGOs (14) and CBOs (12).

While 62% of Kenyans live in rural areas¹⁹⁴ the number of sites in rural and urban areas in these data is similar. Three-quarters of clients nationwide were served in urban sites, over the entire period. Rural sites only attracted an average of 46 clients per site per month, significantly fewer than urban sites ($p < .0001$) and have larger populations in their catchment areas and longer travel/walking distances between sites. There is an increase in rural client flow after 2003 with the percentage of clients that were seen in rural sites increasing from a low of 21.7% in 2003 to 25.1% in 2005.

Although seasonal variation in uptake was reported from individual sites: for example, increases in urban uptake by youth during school holidays and a decrease in rural areas during planting and rainy seasons, no overall seasonal effect was observed. This was also found in the multivariate analysis as discussed in section 5.4.7 below.

Those coming to rural sites are more likely to be women (OR 1.03; CI 1.00,1.05; $p < 0.001$), to have lower educational qualifications (OR 3.01; CI 2.91,3.11; $p < 0.001$), to be in unskilled (largely farm) labour (OR 1.8; CI 1.75,1.85 ; $p < 0.001$) and to be aged 15-24 (OR 1.27 ; CI 1.24,1.30; $p < 0.001$) than those attending urban sites.

When client flow is analysed as average client flow/site type/location (figure 12), stand-alone sites saw close to three times as many clients as health facilities in urban areas. While the uptake of VCT by men was greater than by women in all sites and all modalities (see section 5.4.3 above) this difference was greatest in stand-alone sites, which were even more likely to attract men than health facilities (OR 1.15; CI 1.12,1.17; $p < 0.001$). Health facilities had fewer staff dedicated to VCT (1.0 full-time equivalents versus 3.5 in stand alone sites).

Rural areas and municipalities were served predominantly by health facilities including primary health care centres in villages and the district hospitals in larger towns. Clients in health facilities were more likely to have heard of the service from a health care worker than those in stand-alone sites (OR 1.69; CI 1.63, 1.75; $p < 0.001$) and the relative importance of health care workers spreading the word diminished over time as the mass media campaigns spread and more stand-alone sites opened (PR 0.831; CI 0.819, 0.842; $p < 0.001$ – see table 4).

The larger number of rural sites represented in the database is shown in figure 13 below. The differences of location were found to correlate closely with the model of service provision with stand-alone sites being found in urban areas (12 out of 24 stand-alone sites in Nairobi) and the majority of rural sites being health facilities or mobile outreach sessions.

In order to respond to the inequitable provision in rural areas, a mobile VCT programme was funded in LVCT from 2003 and became increasingly active thereafter. Between January 2004 and June 2005, more than 8000 clients were seen in

mobile VCT sites. This represents 92% of all those seen in mobile VCT outreaches between 2001 and 2005 and 15% of the total number of clients seen by any modality between January 2004 and June 2005.

Figure 12: client flow/site type/location

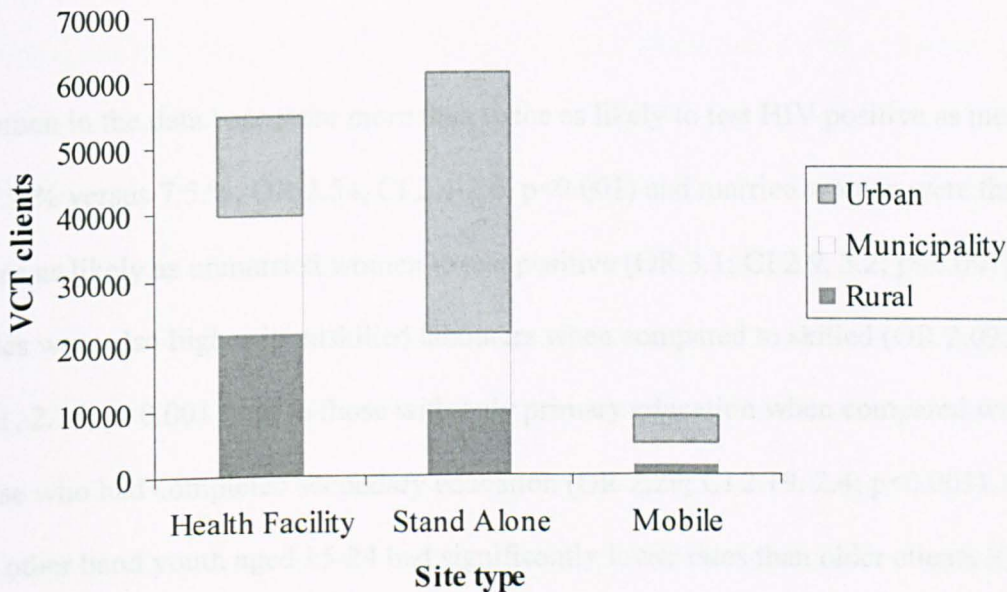
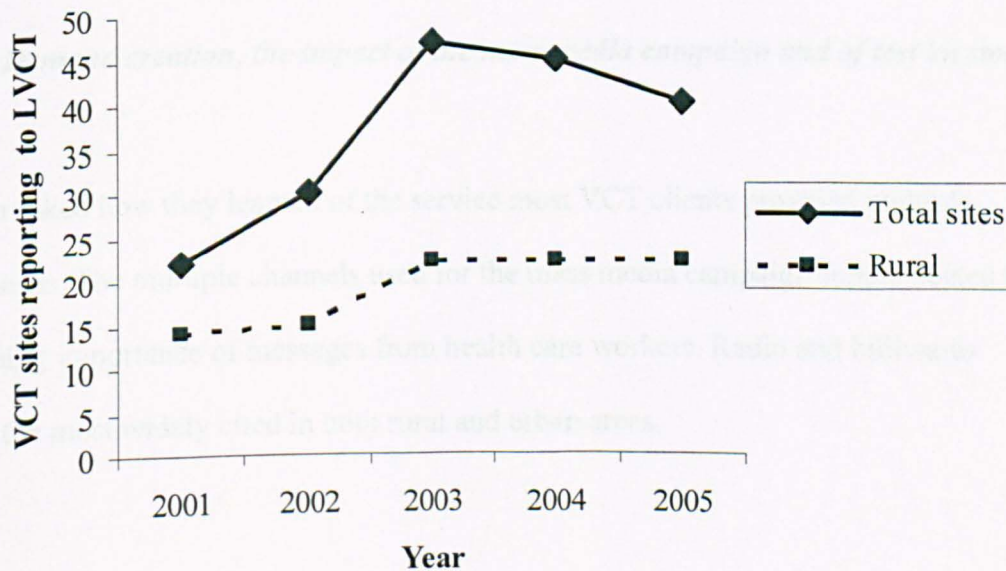


Figure 13: proportion of sites reporting data from rural areas



5.4.6 Uptake by HIV prevalence and symptoms

Over the timeframe of the study there was a trend for fewer symptomatic persons to come because they were feeling unwell, indicating that the target audience of asymptomatic clients was being reached. During the same time period alternative testing in diagnostic and routine (such as antenatal clinics) setting was increasing in Kenya¹⁶¹. The HIV prevalence of VCT clients remained around 12% in VCT clients.

Women in the data base were more than twice as likely to test HIV positive as men (17.2 % versus 7.5 %, OR 2.54, CI 2.4-2.6, $p < 0.001$) and married women were three times as likely as unmarried women to test positive (OR 3.1; CI 2.9, 3.2; $p < 0.001$). Rates were also higher in unskilled labourers when compared to skilled (OR 2.09; CI 2.01, 2.16; $p < 0.001$) and in those with only primary education when compared with those who had completed secondary education (OR 2.29; CI 2.19, 2.4; $p < 0.001$). On the other hand youth aged 15-24 had significantly lower rates than older clients (OR 0.34; CI 0.32, 0.35; $p < 0.001$), as did unmarried clients when compared with married ones (OR 0.27; CI 0.26, 0.28; $p < 0.001$).

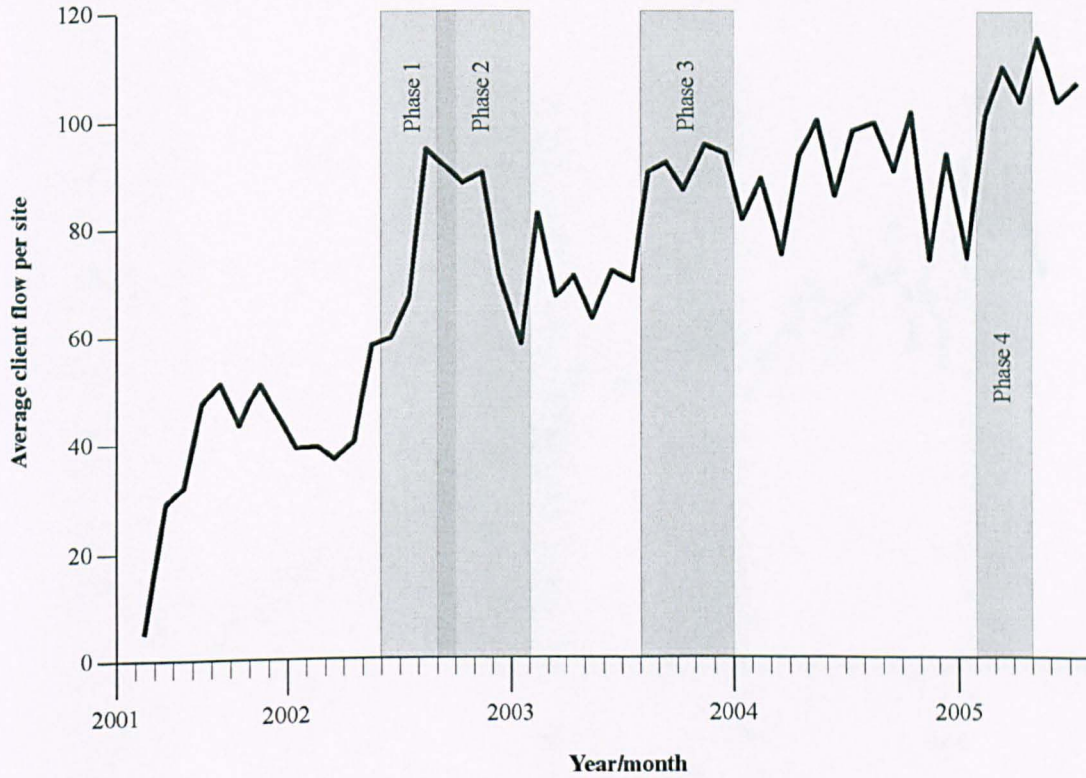
5.4.7 Demand creation, the impact of the mass media campaign and of test kit stock outs.

When asked how they learned of the service most VCT clients provided multiple responses. The multiple channels used for the mass media campaign supplemented the on-going importance of messages from health care workers. Radio and billboards were the most widely cited in both rural and urban areas.

During the study, there was a four-phase mass media campaign, described in detail in section 6.2.4 below. The first and fourth phases made specific reference to the possibility of testing HIV positive, the second and third had a more ‘lifestyles’ or aspirational approach using celebrity role models who had themselves tested to tell the story of why they had tested (but not giving their results). In addition, during the study there were significant periods in 2003 and 2004 with inadequate supplies of HIV test kits nationally (termed ‘stock-outs’). These stock-outs are described in more detail in section 6.3.3 below.

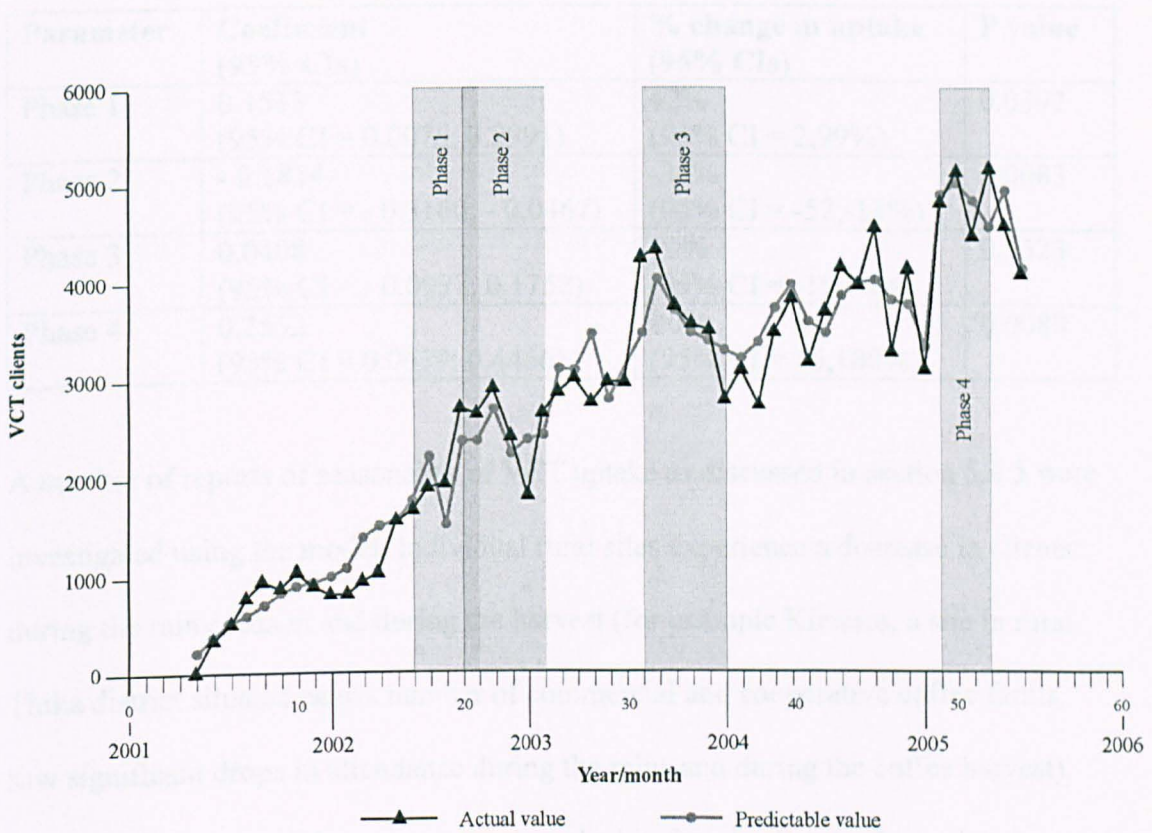
A simple analysis of client flow per site per month (figure 14) during which the mass media campaign was conducted shows pulses of increased VCT uptake following the first and fourth phases of the campaign (indicated by shaded bands) but no such pulses are seen in 2003 and 2004 following the second and third phases. The overall trends in rural areas, whilst representing significantly fewer clients, are no different from those in urban areas.

Figure 14: VCT client flow per site per month (with timing of the four phases of the mass media campaign indicated as shaded bands)



The supply of VCT was increasing at the same time as demand was being created. The number of clients and the number of new sites are closely correlated. Figure 15 shows a well-fitted Poisson regression model with the timing of the phases of the campaign (indicated by shaded bands). The model analyses client flow as a function of the number of sites and allows comparison of observed values with predicted values.

Figure 15: Poisson regression model of VCT uptake April 2001 – June 2005 (with timing of the four phases of the mass media campaign indicated as shaded bands)



It reveals an increase in utilization attributable to the first phase of the campaign of 42% and of 80% following the fourth phase. On the other hand, the second phase had a negative impact (-34%) and the third no impact 10%. The two periods in 2003 when there were ‘stock outs’ had a significant adverse impact on VCT utilization (-15 % change in clients, 95% CI -27.6, -0.6%), but other disruptions in supply in 2004 had no significant impact. The details of the results on phases of the mass media campaign are summarised in table 5 below.

Table 5: Poisson regression coefficients (and 95% confidence intervals) for client flow per site per month by phases of the mass media campaign.

Parameter	Coefficient (95% CIs)	% change in uptake (95% CIs)	P value
Phase 1	0.1533 (95% CI = 0.0076; 0.2991)	42% (95% CI = 2,99%)	0.0392
Phase 2	- 0.1814 (95% CI = - 0.3160; - 0.0467)	-34% (95% CI = -52,-11%)	0.0083
Phase 3	0.0408 (95% CI = - 0.0937; 0.1752)	10% (95% CI = -19,50%)	0.5523
Phase 4	0.2552 (95% CI = 0.0639; 0.4466)	80% (95% CI = 16,180%)	0.0089

A number of reports of seasonality of VCT uptake as discussed in section 5.4.5 were investigated using the model. Individual rural sites experience a decrease in clients during the rainy season and during the harvest (for example Kirwara, a site in rural Thika district situated near a number of commercial and cooperative coffee farms, saw significant drops in attendance during the rains and during the coffee harvest). These declines in attendance were most marked in female clients who undertake much of the farm labour in the area. In contrast, many urban stand-alone sites reported an increase during the same season in in-school youth attending as the rains often coincided with school holidays. When examined in the Poisson model however, seasonal variation had no statistical significance despite local variations from site to site.

5.5 Conclusion

The quantitative results presented in this chapter delineate the progress of scale up. The data reveal a good uptake by youth, in particular female youth but a poor uptake by married men and couples. High HIV prevalence rates in women testing are not accompanied by higher proportions of symptomatic individuals testing. Both rural and

urban sites show increasing VCT uptake but the proportions seen in urban sites far exceed those in rural areas, with stand-alone sites being particularly popular with young men. Extensive VCT coverage was gained in the 5-year period but sites are over concentrated in large cities and many rural areas of high prevalence remain underserved. All this raises questions of equity and quality that are explored further through the qualitative data presented in chapter 6 below.

Chapter 6

Qualitative Results

6.1 Introduction: insights from participant observation and key informant interviews

In this chapter, insights from participant observation (backed up by notes of meetings, workshops etc.) and personal reflection (documenting the institutional memory of VCT scale up) are combined with those from key informant interviews and presented according to the key emerging themes. The themes aid in interpreting and contextualising the quantitative findings. Some overlap with experiences of scale up as outlined in the literature review; others add to the existing literature. Table 6 below outlines the themes and each is discussed in order although recognition is given to the fact that there is considerable overlap and interlinking in the subsections (for example: what is seen as a success from one person's perspective may be seen as a challenge from another's).

Table 6: Summary of qualitative results

6.2 Successes	6.3 Challenges	6.4 Reflections
Establishment of the national taskforce§	Rapidity of scale up§	Need for guidelines§
Choice of testing algorithm*	Human resources and sustainability§	Strategic planning§
Influence of the media§	Logistics and planning§	Cadre of counsellors*
Influence of personalities*	Relations with donors§	Ensuring ownership§
	Relations with the laboratory professionals*	Innovation and flexibility*

§ Themes that mirror or reflect key themes in the literature review (chapter 2)

* Themes that are not in the literature

6.2 Elements contributing to success: 'VCT has focus, drive and a sense of direction'

6.2.1 Introduction

The rapidity of scale up in Kenya was seen as an impressive and politically astute achievement. The increased visibility of VCT and the widespread recognition of what

VCT is were both seen as having contributed indirectly to stigma reduction in HIV. It is clear from the records of meetings, from diary notes and from the interviews that policy makers have pride in and ownership of the process.

“I think it has gone beyond my wildest imaginations” (male, Ministry of Health taskforce member, KII)

The key elements contributing to success can be outlined in four overlapping and inter-linked areas as summarised in table 6 above: the establishment of the taskforce through the leadership of government to provide policy, planning and basic structures; the choice of testing algorithm allowing non-laboratory personnel to test; the influence of the media; and the influences of powerful personalities and organizations. In the words of one representative of a counselling organization:

“This is a focused initiative. Very much so....I can really compare it with family planning campaigns in the 70’s. At the time family planning did a commendable job. VCT over the last two years has had focus, drive and a sense of direction.” (male Programme Officer and taskforce member, KII)

6.2.2 The taskforce is established by government, strategic alliances are formed and policy, protocols and basic structures established

In late 2000, a national VCT taskforce was convened by NASCOP with additional representation from counsellor and laboratory organizations, donors and international organizations, individuals living with HIV, and other stakeholders. The taskforce was chaired by the Head of NASCOP (or the National VCT Coordinator in his absence) and was directly supported by donors during its inception phase. Meetings took place

on the premises of NASCOP. Technical advisors in counselling, laboratory testing for HIV, logistics, training and mass media campaigns were co-opted to join either the taskforce or its subcommittees. Some were regular members and others occasional invited guests with meetings having about twenty attendees (range 12 to 30). The committee membership also included VCT counsellors who contributed practical information derived from lessons learned from pilot sites already functioning in government hospitals.

“one of the things which has impressed me has been the level of coordination between the different stakeholders” (male, donor, KII)

After wide debate at weekly meetings, consensus was achieved on issues such as supervision, optimum number of individuals a counsellor could see daily, minimum age for consent for VCT, and ethical standards (*participant observation and diary notes from VCT guidelines taskforce meetings January 26th – May 13th*). The ensuing national VCT guidelines¹⁰ were the first significant outcome of that taskforce in early 2001. The taskforce also oversaw the development of a standard training curriculum and counselling protocols.

The national taskforce came to an early agreement to forge a standardised VCT counsellor training model based on the experiences of the professional counsellors' associations (primarily KAPC), the donors (primarily the CDC curricula piloted in other countries) and that of the LVCT pilot phase (*VCT taskforce minutes Nov 21st 2000 and KAPC letters Feb 21st 2001*). This curriculum became a key element of the subsequent site registration and quality assurance systems, allowing the same standard

to be ensured in registered sites. The development of the manual to the satisfaction of all parties with different views took almost two years of drafting, piloting, redrafting and debate. There was disagreement on the length of training (with KAPC wanting a long training, government agreeing to a two week training and CDC pushing for two day training on testing alone). There was also disagreement on the content of training with KAPC pushing for a theoretical basis (grounded in counselling theories) and fully client-centred therapeutic sessions, LVCT an approach that was based on counsellor's job descriptions and CDC a flash-card based system of questions and information-giving. Disparate elements, content, curricula and theories of adult education were brought together by a team from LVCT with support from stakeholders. While the participatory processes may have compromised the overall quality (*VCT taskforce training subcommittee notes, June 2002*) of the manual, the buy-in of all key training organizations was achieved. A final agreement was reached in 2003 when the LVCT authored manual was published¹¹ and a three week training course was sanctioned.

The taskforce and stakeholders ensured that a basic QA structure was an integral part of scale up from the beginning. Within a year of the establishment of the taskforce, the guidelines had been disseminated throughout Kenya and a registration system enforced that meant that all VCT sites should be operating under the same standards (*Report on piloting of registration system VCT taskforce minutes Nov 7th 2001*).

Only registered sites could access free HIV test kits funded by a World Bank loan¹² in exchange for data on client uptake. A national data form was developed and registered sites complete a form for each individual. The minimum standards set for site registration became a requirement for receiving free test kits from NASCOP.

“The government took a loan from the World Bank for the purchase of test kits. It helped us. Free kits probably accelerated the process and allowed us to control it.”
(male MoH taskforce member, KII)

The registration system then formed the basis of a comprehensive quality assurance programme that included supervision of both counselling and testing, continuing education, laboratory-based testing using dried blood spots and inspection of sites. This system was developed by LVCT and is described in more detail in chapter 7 below as well as in an accompanying QA manual⁸⁶. In late 2003 a National Quality Assurance Team was established, including technical and supervisory staff, who visit all sites annually.

NASCOP, a branch of the Ministry of Health, brought together donors and other stakeholders, endorsed the guidelines and supported concepts of registration and basic quality assurance. Four staff at the national office were dedicated to VCT and free test kits were offered to sites. A commitment was made at the NASCOP level to expand VCT to public sector sites throughout the country, a step beyond other countries in the region.

“Because I can tell you for example that I know a number of neighbouring countries where we are ahead. I am not trying to be backbiting. But compare the Kenyan model to the Ugandan for example. Me I see the NGOs like TASO and AIC(in Uganda) leading the process. I think it was a later realisation for them that the MoH was to come on board for issues of standardisation and harmonisation.” *(male MoH taskforce member, KII)*

However, interviewees felt that the higher levels of the Ministry of Health were less visibly committed to VCT and this lack of visible commitment was then reflected in provincial and district structures, often making VCT seem a vertical, donor-led initiative despite its co-location in government health centres. Many interviewees felt that funding constraints and fears of committing to future salaries meant that discussions about a cadre of counsellors were repeatedly stalled. No clear line management structures or true integrated approach could be established as a result. There was no decree or statement from higher levels of government (i.e. the Minister of Health as opposed to NASCOP) about who should conduct the counselling and testing, leaving it unclear whether non-health care workers could conduct counselling and whether non-laboratory staff could conduct HIV testing if trained.

“I have found the government to be very tame. They don’t have much of a position.”
(male technical advisor, taskforce member, KII)

Views expressed by key informants in interviews were on the whole positive about the relationship between government and the donors. Significant amounts of donor funding were earmarked for VCT during the period 2001 – 2005, with the majority coming from American and British government agencies.

“The relationship has been a very good one. I give credit in part to Dr Chebet. He is accommodative and facilitatory. It has helped with the vision and the roll out ... I think this happened at a time when the overall relationship between the donors and

the government was not that good. It is an added credit to him.” (male technical advisor, taskforce member, KII)

6.2.3 Choice of testing algorithm and allowing non-laboratory personnel to test: ‘clients have absolute confidence in their results’

The two issues generating the most heated and acrimonious debates in the taskforce (recurring theme in taskforce minutes Nov 2000 – Sept 2003) were the testing protocol and who should conduct the counselling and testing. Simple, whole blood rapid tests were recommended, which allowed for testing to be done immediately, reducing waiting time¹⁹⁵. As outlined in section 3.5.3, an initial decision was made to recommend parallel testing (2 different ELISA-based rapid tests used simultaneously) as opposed to serial testing (where only positive results are confirmed), the WHO minimum standard. From analysis of taskforce minutes, diary notes and participant observation it is clear that this decision was based on a number of factors. Firstly, at the time of the decision there was no country-wide external quality assurance mechanism in place for HIV testing and it was felt that public confidence in VCT needed to be built. Stories of repeat testing or wrong results could do a lot to damage the programme. Secondly, given the high HIV prevalence rates, the additional cost of parallel testing was not seen as prohibitive as people with positive results would need a second finger prick for confirmatory testing any case (*VCT taskforce minutes, January 26th, 2001*).

The second contentious area was whether health workers (primarily nurses) or counsellors should provide the counselling and testing. Some committee members argued that it was wrong to divert health workers from clinical duties; others argued

that medical diagnoses should remain the prerogative of clinicians and HIV testing the prerogative of laboratory technicians and technologists (*diary notes, March 7-9th, 2001; Guidelines Retreat*). The guidelines permit both approaches. Currently, health workers provide VCT services delivered in health facilities, and lay or professional counsellors generally provide those in stand-alone or community sites. Only larger sites with a high throughput of clients employ a lab technician or technologist to do HIV testing. Qualified laboratory staff are involved in the training and certification of VCT counsellors in HIV rapid testing, the supervision of testing in VCT sites and the internal and external quality assurance mechanisms. One donor was especially keen on this method and explains why:

“I have been a big proponent of doing the parallel testing to ensure the accuracy of the results and to ensure the confidence in the results. I always say that if the client, positive or negative walks out of the room still saying to themselves ‘well maybe it is not correct what they told me’ that is all they will be thinking about. So the only way for us to get the client to focus on the prevention messages and the messages about care is to get the client to completely accept the test results and stop focusing on the test and start focusing on their own behaviour.” (female, donor, KII)

An unexpected benefit of allowing the counsellors to test emerged in that the clients really appreciated the additional confidentiality offered by in-room testing as well as the confidence that their blood test had not been mislabelled (*diary notes, January 2002 and LVCT research on perceptions of oral testing*¹⁸⁷). This ownership of the results had an impact not only on the post-test counselling session but also on acceptance of the results, post-test risk behaviour and on rates of retesting. It was

widely quoted in meetings and interviews that both clients and counsellors had increased confidence in their results with a parallel testing system.

“It is important for the client and the counsellor to do their thing together and for the client to watch.” (male, laboratory, KII)

“The parallel testing for me has answered many questions that the counsellors would have raised.” (female programme officer and counsellor supervisor, KII)

In all but two of the key informant interviews, participants felt that the counsellors, if adequately trained to do so should conduct rapid testing. The two dissenters were both laboratory representatives who felt strongly that:

“the guidelines state that testing should be conducted by laboratory staff unless there are none available...but I want to believe that technologists and technicians we have sufficient...Of course you might need to hire and as you hire you might need to train.” (Laboratory technologist, KII)

“it rightly belongs to the lab people to test.” (Laboratory technologist, KII)

Despite accepting the results of data from a quality assurance study conducted in VCT sites in Kenya indicating that the quality of testing conducted by counsellors was more accurate than that conducted by the laboratory staff¹⁹⁶⁻¹⁹⁸, both continued to insist that testing was the prerogative of laboratory personnel. This is explored further in the challenges of scale up (section 6.3.5).

6.2.4 The influence of the media: 'very effective'

To support the scale up of VCT services, and to increase public demand for these services, a multi-stage promotional campaign was included in the overall national plan⁹. The impact of the campaign on VCT uptake has already been discussed in section 5.4.7 (and figures 13 and 14 above), but the development of the campaign, the details of campaign content and their evolution were significant qualitative findings presented in what follows. A national VCT communications committee was formed and a draft strategy presented to the taskforce (*VCT taskforce minutes August 29th, Sept 19th, Nov 9th 2001*). Its initial decisions were to design a logo and to conduct a series of professionally designed mass media campaigns to influence the attitudes and behaviours of targeted audiences. Population Services International (PSI) was contracted as the implementing agency. Formative research was commissioned to understand motivations for and barriers to VCT use. The research, conducted with service users and non-users¹⁹⁹ contributed directly to the development of the first phase of the campaign (National Communication Strategy for VCT Draft Report presented to taskforce September 2001).

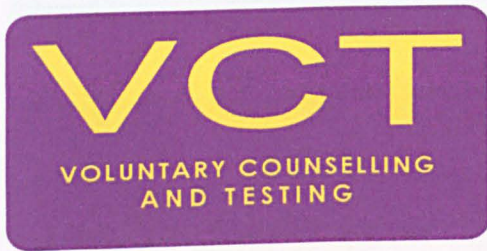
A simple, easily recognizable logo (figure 16) was designed and pre-tested with potential service users and providers. Signboards with the logo were provided to all registered VCT sites, and the threat of their removal through deregistration became a motivation to meet quality assurance standards (*NQAT minutes, December 5th, 2003*). This logo has become widely recognized in Kenya, with unregistered sites trying to display hand painted copies.

“the purple signboard I think it something that is well accepted. It has made a visible impact” (female, technical advisor, KII)

Figure 17: The influence of the VCT Campaign 2002

“We normally tell them to look for that board. It assures quality.” (MoH taskforce member, KII)

Figure 16: VCT Logo



The mass media promotion of VCT in Kenya linked directly with the logo and was conducted through radio spots, discussion on radio shows, press advertisements, posters, flyers and signage (billboards, advertising on street signs). The logo was then used on all advertising and print materials. As VCT expanded, a four-phase campaign evolved with each phase being developed in response to the previous phase and to issues raised by the taskforce and other stakeholders.

Figure 18: The influence of VCT Campaign 2002. The campaign was split in 4 phases

Campaign 1, May to September 2002

The objectives of this campaign were to build knowledge of and confidence in VCT services, create links between consumers and VCT centres, and launch the VCT logo. The target audience was 15-39 year-olds residing in urban and peri-urban communities where the majority of VCT centres were located at that time. The approach posed commonly asked questions, many taken directly from the formative

research, and invited the audience to “discuss this question at a VCT centre near you”.

Registered sites were listed on the print material.

Figure 17: Four billboards from first VCT Campaign, 2002



Campaign 2, August 2002 to January 2003

The second campaign targeted 15-24 year-olds in urban and peri-urban settings, with the aim for youth to “get in control of their life” by knowing their HIV status. Using lessons from condom advertising, a ‘positive lifestyle’ approach was used. No direct mention of testing HIV positive was made. The campaign used popular Kenyan entertainers who had been for VCT themselves. They encouraged youth to know their status. The campaign used a slang term “chanuka” meaning “get smart”.

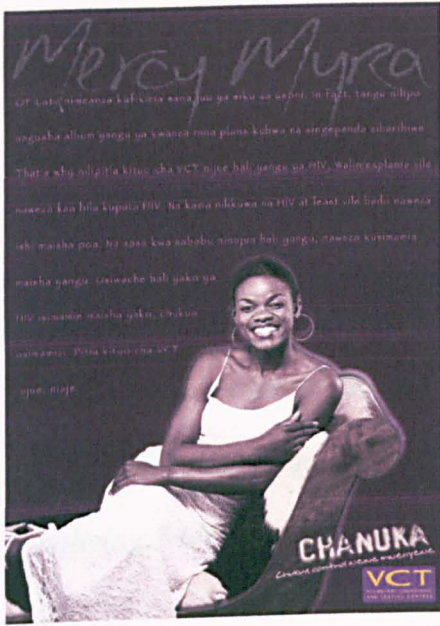


Figure 18: Poster from second VCT campaign in 2003

Campaign 3, July – Dec 2003

The third campaign was targeted at urban/peri-urban ages 18-28, with the objective of establishing a norm among young couples to know each other’s HIV status during key life events such as marriage or starting a family. Taking advantage of the popular “chanuka”, the third campaign used “chanukeni pamoja” which means “get smart together.” The campaign again featured celebrities, this time as couples.

The potential for linking mass media and logos to quality was recognised early and led to some debate. Some donors felt that too strong a link (or ‘branding’) of logos with quality and accreditation would damage their aims of just getting as many sites open as possible. Heated debate and personal vendettas ensued with USAID petitioning NASCOP not to institute the accreditation process (*participant observation in accreditation dissemination workshop April 25th 2002 and diary notes week beginning May 6th 2002*). USAID may even have cut funding to LVCT primarily because they felt the concerns about QA were misplaced and inappropriate

and had the potential to hinder scale up. Some regret was expressed about this in interviews conducted during later stages of scale up.

“Take the example of accreditation. I know Liverpool has really pushed that. But many people were negative towards that but in the end it was something, which was good. I remember we all feared branding because sometimes if it is strong branding so many of the facilities would not even have the services. Maybe some people think it is policing.” (donor and taskforce member, KII)

The first three phases of the campaign had a much lesser impact on public perception in the rural areas and was widely quoted that ‘it has not reached the rural yet’. In fact feedback to this effect from provincial and district staff interviewed in this and other qualitative research settings led to the development of a more rural campaign.

Figure 19: Sample billboard from third VCT campaign, 2004



Campaign 4, January – April, 2005

In late 2004, antiretroviral therapy for the treatment of HIV became available at provincial hospitals alongside increased access to VCT and other clinical HIV/AIDS

services in rural areas. The fourth VCT promotion campaign overtly discussed HIV and the treatment available for people who test positive. The campaign targeted low income urban and rural male family decision-makers and established couples ages 18-35. This campaign used actors that represented working class and ordinary Kenyans, such as tea plantation workers, a mechanic, women at the market and so on. The adverts modelled families, and were designed to appeal to adults as family role models. Some of the characters indicated that they were HIV infected. This campaign retained the “Chanukeni” phrase and also added: “Onyeshya mapenzi yako” which means “show your love” (figure 20). The characters made statements such as “I took an HIV test because I love my family”

Figure 20: Sample billboard from fourth VCT campaign, 2005



One unexpected outcome of the mass media campaigns was that they stimulated VCT to become fashionable among politicians and organizations alike.

“Politicians came looking for a VCT. I would ask them ‘Why do you want a VCT?’ ‘because we have seen it in the media’.” (MoH taskforce member, KII)

*“The interesting thing about the campaign that was **not** intended was that it clearly affected the supply of VCT. Everyone now wants to have a VCT site. I think VCT, because of the campaign has sort of been perceived as the thing to do. As the thing to offer. You can’t really be a respectable AIDS programme or a respectable health centre or hospital or whatever and lately even a church, unless you are offering VCT.” (donor, KII)*

This in turn may have exacerbated equity challenges as more and more organizations, with their headquarters conveniently located in Nairobi or other large cities, opened VCT sites where their organizations were located rather than where the need was greatest. Since location did not feature on the registration criteria established by the taskforce and the government did not wish to block any new VCT site, clustering of VCT emerged in certain areas not based on HIV prevalence, access to VCT services or population density.

“The mass media has had a contribution to VCT in the urban areas. It has encouraged many organizations to start a site and they are pleased. But look where they also are based. Organizations are still based in the urban areas. Still we leave out the rural” (male, MoH employee, provincial level, KII)

“That demarcation by donors of areas for VCT – for that we will be blamed forever. The kind of scale up we did was poor. It is now becoming very political. We get letters from MPs and Ministers asking ‘Why is VCT not in my district?’” (female MoH, taskforce member, KII)

While the mass media campaign was seen as ‘very effective’ the media in general were poorly briefed in the early days of VCT. It became clear after press debates that many journalists has a poor understanding of VCT and should have been involved earlier through more detailed press briefings.

“The steps now being such as seminars for editors and journalists – those are now the right thing. Because then they get to understand the subject and write the right thing.”
(female laboratory professional, KII)

The contribution of the media to the debate around testing had both positive and negative implications explored further in the appropriate section below.

6.2.5 Influence of personalities: ‘it has been done by a handful of people’

Throughout the three-year period that the taskforce minutes were reviewed and in all the key informant interviews, the same five or six individuals are mentioned again and again as having had a powerful influence on VCT scale up.

“In my own assessment, in any activities, especially new ones, the commitment of individuals is at the heart of moving things along. Without such individuals very small, small roadblocks would stop the effort. We know that VCT has been spearheaded by very strong, experienced and motivated individuals.” *(male laboratory, KII)*

Three people are mentioned most consistently in the interviews. Firstly, the head of NASCOP is regarded with respect for holding such a diverse group together without

alienating any powerful partners. Secondly, one donor is credited with the drive, impetus and experience to push for rapid scale up, multiple models of scale up, parallel testing algorithms, and the use of non-laboratory personnel to conduct testing: ‘plenty of personality and plenty of money’. While in some cases this risked alienating people, many reflected in retrospect that it may have turned out for the best. Thirdly, I am mentioned frequently as director of LVCT in conjunction with training and quality issues. The challenges and opportunities of my role in the research, as a taskforce member conducting the interviews and as a driving force in VCT scale up are discussed in the methods (section 4.3.1) and revisited again in the discussion.

“I think we are fortunate to have individuals that saw the crisis and were able to see the things that needed to be done. Personality clashes have definitely been there as would be in any situation of very strong people...On the whole the underlying motives were good. So even if people were being very strong about certain issues they were not being strong for selfish reasons. Over time people have come to realize.” (male TA, Nairobi, KII)

Both pros and cons of the ‘*strong personalities*’ were mentioned. The fears that the dominance of donors could lead to a lack of sustainability are discussed further in section 6.3 on challenges below.

6.3 Challenges of rapid scale up: *‘my biggest concern is opening a service that is worthy, not just opening sites.’*

Once the guidelines had been established and sites opened, taskforce meeting agendas began to be structured around reports from the field as well as from technical advisors

(participant observation and taskforce minutes 2002 onwards). Thus by the nature of the meeting structure, a brief progress update would be followed by long discussions of the difficulties being faced in VCT service provision. They roughly fall into five themes as presented in table 6 above: issues around the rapidity of scale up compromising quality (section 6.3.1); human resources and sustainability (section 6.3.2); logistics and planning (section 6.3.3); relations with donors (section 6.3.4) and the laboratory ‘fight’ (section 6.3.5).

6.3.1 Rapidity of scale up

The challenge posed by rapid scale up to the quality of services is a dominant theme in taskforce meetings and minutes from 2002. The terms of reference of the NQAT established in 2003 was specifically to improve quality in VCT and support the functioning of the quality assurance systems. Reports of poor quality from site visits were dealt with at this level after 2003 with regular updates on registration, licensing and accreditation of visited sites given at the wider taskforce meetings. Quality also dominated the interviews. The vast majority of key informants interviewed also expressed concerns that the sheer volume of new sites was a threat to quality of VCT in Kenya.

“We have focused so much on covering the country that we forgot about quality of services.” (female donor and taskforce member, KII)

“What started as a pilot has been scaled up too fast. There has not been time to be actually able to face the challenges and benefit from the lessons learnt” (female Ministry of Health taskforce member, KII)

Many technical advisers gave specific examples from their fields (counselling, testing, logistics) of how the rapidity of scale up had compromised quality. Quality concerns were mentioned by all but two of those interviewed (one a current and one a previous government employee) who both felt that the VCT services provided in Kenya were of high quality when compared to other government services and that poor quality reflects a 'national culture' in health care. They also reflected the more widely held reluctance amongst ministry staff to countenance deregistration of sites in almost any circumstances despite quality concerns as this might damage the political gains and public visibility of the service. By mid 2005 only 5 sites had been deregistered, four of these because they no longer appeared to exist at the stated address. A common sentiment, reflecting the ethos of the newly established NQAT was that:

"We should be doing a lot to be able to help a site to come up to the registration standard rather than policing just to knock off sites." (Male laboratory technologist, KII)

"Closing a site is a last resort" (Provincial MoH, KII)

As a consequence of rapid scale up, over-burdened health care workers were at risk of burn-out from VCT. Counsellor burn-out is a recognised quality assurance problem in counselling and was brought up as a common theme among service providers and programme officers both in the interviews and in taskforce meetings. The VCT taskforce in Kenya tried to address this through the guidelines' insistence on regular access to support supervision for all practicing VCT counsellors. Whilst such supervision systems were largely in place (and a requirement for registration), burn-

out is also closely related to evaluation, performance review and how a system values and supports the contribution of the individual – factors seen to be lacking in the establishment of VCT in the public sector and discussed in more detail in what follows.

6.3.2 Human resources and sustainability

The establishment of VCT in government health centres led to the diversion of health care staff from other crucial duties such as nursing. It meant staff had multiple responsibilities and felt divided in their professional loyalties. In cases where staff were dedicated full-time to VCT, busy nursing jobs were unfilled.

“We have had a non-replacement policy within the hospitals and within most of the MoH now for years. At this point it is impossible for a major redirection of health personnel into VCT simply because they are being established. If you don't have some kind of a provision for the staffing (by donors) then the whole exercise is very irresponsible.” (male donor, KII)

“In one way or the other the thought of money almost interfered with the service. Heads of Department were not willing to release staff for VCT. You find that somebody has started VCT and in 6 months they are transferred. They had not been orientated on the role and the importance.” (District MoH, KII)

“My biggest concern is retaining the counsellors. Those counsellors really work hard but they are not appreciated. There should be a commitment from the administrators and a way of not transferring them. Look for a way of motivating them. Either from

cost-sharing or even the establishment of a cadre with clear promotion and a scheme of service.” (male, Ministry of Health employee, provincial level, KII)

Closely linked to this issue are concerns over the lack of line management structures of clear administrative procedures and systems for promotion and evaluation of counsellors. As counselling is not regarded as an independent profession in health care, many health care workers doing VCT counselling were still under the management of their previous professional bosses (a variety of hospital matrons, physiotherapists, nutritionists) and were easily passed over for promotion or pay rises.

“it was clear to me that there were many administrators in government institutions who had not yet caught up with the idea that VCT was part and parcel of their responsibility. Any personnel that was deployed was requested to be applying most of their time to VCT – there was quite a lot of resistance to it.” (male laboratory, KII)

“VCT are manned from all directions. Some are public health technicians, some are nurses etc. 90% don't regard themselves as counsellors” (male, programme officer, KII)

Thus while there was government leadership at NASCOP at the higher national levels, including the Ministry of Health, VCT continued to be viewed as donor-initiated vertical programme and few internal steps were taken to ensure its sustainability and quality. This in turn exacerbated the inequities of access in poorer areas where donors were less eager to establish sites, feeling it to be the responsibility of the government.

6.3.3 Logistics and planning: 'we have had huge problems in stock-outs'

During the first three years of VCT scale up, there were periods when there was an inadequate supply of test kits in the country (months 27, 28, 38 and 45-48), requiring sites to move to serial testing and in some instances close altogether. Sites supported by NGOs and by the Centres for Diseases Control bought in and stockpiled rapid tests to prevent site closure and mitigate the impact of 'stock-outs'.

These 'stock-outs' became the focus of emergency meetings of the taskforce and of much concern, with donors having to provide funds for additional procurement during at least one of these. In addition several NGOs tried to protect their stand-alone VCT sites and minimize damage to the programme through additional procurement during these periods (*diary notes and correspondence with CDC and Futures Group, April and June 2003*).

A logistics subcommittee of the taskforce was mandated to come up with projections based on modelling (*JSI presentation to VCT taskforce, August 23rd 2001*). The supply and delivery of kits through the government stores was subcontracted to an NGO (JSI), intended to build capacity of the government. The provision of free kits in exchange for data was intended to allow for a complete set of data, but despite this and far more kits being procured than VCT clients there were on-going problems after the first stock-out. This was in part blamed on poor designs of the data form and on supervision (*participant observation and minutes of VCT taskforce April 17th 2003*). However the main problem raised in meetings (*Minutes of an emergency meeting of VCT taskforce held to discuss the status of test kits in the country, June 30th 2003*) was that rapid tests, intended only for VCT and PMTCT were being used for all hospital

HIV testing, including screening of donors, diagnostic testing and other purposes. One Ministry of Health employee explains this as follows:

“The moment they are put in the normal Kenya Medical Stores they can be ordered by anybody in the hospital. After all they are justified to do that because most of these long ELISA machines are not working. If they were put specifically for VCT by a VCT programme manager somewhere at the district - then I think the person who is in charge of repairing these ELISA machine would have moved faster. Now they cannot move because they already have a solution.” (MoH taskforce member, KII)

In addition to poor planning, there were also reports of test kit theft.

“There certainly is some leakage. It is the same supplier for the public sector as the private sector. The packages are absolutely identical.” (technical advisor, logistics, KII)

6.3.4 Relations with donors: “the donors have taken the front seat and the government have become a passenger”

The donor reporting requirements, donor target areas and pre-existing training and other protocols were given priority, particularly in the early stages when a lack of alternatives existed.

“An example that really annoyed me is the example of the data collections sheets ... because of the reporting requirements of the donors we retained the long version.” (female technical advisor, Nairobi, KII)

While there was some movement among donors to let NASCOP take leadership, many restricted this to government working with their implementing partners.

“Another challenge is on how to balance resources inputting. A lot of resources for VCT came from donors through the non-governmental sector. At one time I was thinking is it the lack of trust in government? We became patient. We swallowed our pride and did it for the common good. We didn't want to question so much as there are few resources in the health sector.” (male MoH taskforce member, KII)

Between 2001 and 2004 priority geographic areas were decided largely by donors. They then announced their geographical areas of work to the VCT taskforce meetings after their decisions had been reached (*VCT taskforce minutes Jan 26th 2001, May 16th 2002, Jan 21st 2003*). This donor-led district selection is an issue that is alluded to by the quantitative results in section 5.3 above on VCT coverage and is explored further in the reflections on strategic planning in section 6.4.2 below.

“In my view the donors have taken the front seat and the government have become a passenger. This is unfortunate. Even the amount of money the government is ready to invest in VCT is minimal. Most of what we have in VCT is donor funding.”
(Programme officer and taskforce member, KII)

A number of interviewees, including government employees and donor representatives expressed disappointment in donor policies of not funding salaries, indicating that this could well jeopardise the future sustainability of VCT services under the current IMF moratorium on hiring health care workers¹⁵⁵.

“I fail to understand, donors come, giving in a lot of funding and aid to HIV/AIDS, why donors can't use some of that big fund to pay salaries?” (District MoH, KII)

Fears that personality dominance of donors could lead to a lack of sustainability are also raised.

“ when certain people say they want something a particular way NASCOP will say that is OK.” (female TA, Nairobi, KII)

“if one or two persons have not given the go ahead, everyone is stuck... also it is an issue in this country that if Person X (referring to a donor representative) is not comfortable it cannot be done. These are individuals’ (MoH taskforce member, KII)

6.3.5 ‘The laboratory fight was the biggest challenge – we were almost at the brink of collapse’

Various described in interviews as a ‘turf war’ a ‘threat to professionalism’ and ‘merely a concern over quality standards’ the debate over who should conduct the testing almost brought VCT scale up to a halt. Initial taskforce meetings agreeing the VCT guidelines had representation of a number of laboratory professionals including the KMLTTB. After fierce debate in 2001 the agreed wording for the guidelines on who can conduct testing was:

“All HIV testing for VCT should be done by laboratory technologists or technicians. However, in some locations and settings this is not possible. If they have successfully completed an accredited training in testing procedures and are supervised by a

laboratory technologist/technician, other health workers may perform simple rapid tests for VCT purposes. All safety precautions must be observed."¹⁰

For practical purposes in the field however, only a proportion of testing was being conducted by laboratory personnel. A few large stand-alone sites were able to hire one technician or technologist, but most sites, including health facilities were conducting in-room testing by health care workers (*participant observation, diary notes Nov 21st 2001*). Lay counsellors were loosely interpreted as being health care workers of sorts. Some time after VCT was well established in the country the issue was brought to the attention the Director of Medical Services (DMS) who tried to placate both sides, changing the wording of the guidelines to add 'or any other person authorised by the DMS' and effectively turning a blind eye to the status quo. Due in part to a lack of clear statement from leadership the debate continued to rage in the Annual Conference of Laboratory Scientific Officers in Kakamega in October 2002 where data were presented that confirmed the accuracy of lay counsellors' testing ¹⁹⁶⁻

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The conference preceded the 2003 election of officers for the AKMLSO and VCT became the platform for potential candidates who linked it to the high rates of unemployment in AKMLSO members. As a result of the elected officials' interventions, the debate reached the press in August 2003 with daily articles for almost a month (see headlines in Appendix C). While the press debate had potential to damage VCT or even to bring the scale up to a halt, it also had the converse effect of raising the profile of VCT. Some interviewees were very frustrated by the debate.

“I feel if all that energy went into checking if there was quality that would have been better than arguing” (female programme officer, Nairobi, KII)

Some of the reasons for this may not have been purely driven by the VCT agenda

“The relationship between the Board and the Association has not only affected VCT. It has affected the profession in unimaginable proportions.” (male laboratory technologist, KII)

Furthermore the timing of the press debate, triggered by the Laboratory Association raising quality concerns about non-laboratory personnel testing, coincided with forthcoming elections for Association officials raising the possibility that the scale of the debate was in part a publicity stunt.

Interestingly the debate was barely felt outside Nairobi. In fact some of the district and provincial interviewees thought the bad publicity may have stimulated interest in VCT and encouraged people to check out what was really happening. Most districts already had good working relationships between the busy laboratory staff and VCT as well as an understanding that Lab staff would not have time to commit to counselling and rapid testing session.

“there is no problem- not in my district. At national level there has been a lot of politics but in our area so far no problem.” (District Medical Officer of Health, KII)

While most people felt that bringing the Laboratory Board and Association members to the taskforce in an official manner from the onset of scale up would have prevented the conflict, there were still those who felt that their presence may have inhibited scale up in the public sector.

“If they were on the taskforce earlier it might have affected scale up. Depending on how strong they were or how forceful of their point of view it could have blocked expansion. I think so.” (female, donor, KII)

“the issue has been resolved because the government has supported VCT scale up well knowing that we don’t have enough lab people to cope.” (female programme officer, Nairobi, KII)

Most concluded that clear government leadership on the role of the lab was required, regardless of potential alienation.

6.4 Reflections on what should have been done differently in retrospect

Most interviewees were pleased with the basic policy and protocols that were in place including the guidelines, the working group, the registration and deregistration of sites plus a standardized training curriculum. These elements of successful scale up were recommended as good practice for replication. However, there were a number of things that interviewees stated they would have done differently in retrospect. Many were also reflected in taskforce meetings and diary notes. As the author these reflections not only arose from analysis of transcripts but also from personal reflections shaped by long conversations with colleagues, clinicians, counsellors and

friends. As a taskforce member I had been a vocal supporter in taskforce meetings for the establishment of a cadre of counsellors (6.4.3) and the need for innovation and flexibility to ensure equity of access to services (6.4.5) and this may well have influenced interviewees' responses and the weight they gave to different issues. The implications for the research results and analysis are revisited in the discussion. Five key elements are presented in table 6 above and are discussed in what follows.

6.4.1 Earlier recognition of the need for guidelines on HIV testing in general

Many expressed the sentiment that they wished broader guidelines had been in place earlier and one voiced that policy should have been more forward thinking and incorporated guidelines and best practice for all forms of HIV counselling and testing rather than just VCT.

"I think what I would do is say instead of doing guidelines for VCT I would recommend doing guidelines for HIV testing of which VCT is a subset rather than the universe of testing. Same with guidelines for PMTCT should be a little different from VCT, which should be different from diagnostic testing....So I would try to do those guidelines and have a national discussion/debate among all stakeholders, including lab technicians and medical practitioners, about these different forms of testing and then develop guidelines for all of them. In retrospect I wish we had done that."
(female donor and VCT taskforce member, KII)

The development of broader guidelines would in turn have led to improved linkages with HIV care and more solid referral patterns.

Quality assurance systems that were felt to be inadequate in retrospect could have been strengthened earlier.

“In terms of rolling out those quality systems to the ground; to the people that have the responsibility. That I see as the challenge. That is the area that I see us as putting in more things. Certainly from our side we are going to look at what has been developed and we are going to look at how we can support taking that to scale, to the districts that we are working in.” (programme officer and taskforce member, KII)

6.4.2 Strategic planning

Taskforce members were interviewed during the first month of a VCT strategic planning exercise precipitated by planning for PEPFAR funding. With this exercise fresh in their minds all taskforce members interviewed felt that the exercise had been needed earlier and some that it would have led to more equitable distribution of sites. Many felt that the planning had been rather hasty, that not enough was borrowed from other countries and too much emphasis placed on just getting sites open.

“HIV has been here for 20 years. It is no longer a matter of fire fighting. We need to sit and plan, giving time, attention and focus.” (male programme officer, KII)

Such a planning exercise would have allowed the use of population densities and prevalence rates to decide where VCT sites should be conducted. However members were still unsure whether there was a greater evidence base for the prevention benefit of VCT in high or in low prevalence areas with most feeling that high prevalence

areas were more deserving of VCT sites as they were aware of the evidence that positives more likely to change behaviour than negatives⁵.

Such a strategy needed to include aspects of logistics, a management information system, simplified data form, decision on serial versus parallel testing as well as the location and distribution of sites mentioned above.

“Anything else we would have done differently would have come out of actually having a proper national strategy, which would have involved all the donors and their funding or their proposed funding. Yah – there has been very little coordination or vision by government in this.” (male donor, KII)

All felt the need for the strategic plan to be led by government. Although there was debate about whether VCT would be more successful as a vertical programme, most government staff and some donors interviewed felt that a fully integrated service was the ideal. In either case the need for clear line management structures and for the establishment of a cadre of HIV counsellors with a clear scheme of service was seen as vital.

6.4.3 Cadre of counsellors A number of interviewees called for clear line management structures and systems in place in the Ministry of Health including a cadre of HIV counsellors trained and employed in their own right as professional HIV counsellors. They felt this would reduce burn-out of counsellors, would gain the support of administrators (and thereby reduce transfers) and would provide clear systems for evaluation and promotion.

“I hope that very soon there will be a solution to this within the Ministry of Health in terms of a cadre of counsellors at least for HIV.” (male laboratory, KII)

Training modules were thought to be required that allowed counsellors to rotate through PMTCT, ARVs, Adherence, VCT and other HIV-related counselling areas.

“The government should look into that and bear in mind the shortages of staff. They should have personnel and make their designation as counsellors and concentrate on VCT.” (District MoH, KII)

A cadre of counsellors would allow full integration rather than VCT looking like a donor-based programme. Some favoured a vertical programming approach, while others a more integrated approach in primary health care.

“VCT should have a system (of line management). If you look at TB and leprosy there is a system. Head Office down to Provincial there is a system.” (MOH taskforce member, KII)

“I would have a structure. It would be a very, very clear structure from the district to the provincial to the national. A cadre is not enough.” (MOH taskforce member, KII)

Some progress has been made since 2005 in outlining the scheme of service and cadre of counsellors but initial negotiations (*VCT taskforce minutes, Nov 18th 2003*) were between the Ministry of Health and the Kenya Association of Professional Counsellors only, totally bypassing NASCOP and other taskforce members involved

in practical service provision on the ground. At the time of writing a curriculum is being developed by the Kenya Medical Training College but the IMF moratorium and the lack of donor commitment to funding salaries continues to hamper the progress of the development of a cadre.

6.4.4 Ensure ownership; 'bring the lab fraternity on board earlier'

Many of the interviewees, including government employees, stated that they wished they had involved the senior laboratory 'fraternity' and Association earlier. In fact the laboratory members interviewed would have welcomed their inclusion in planning, in study design to evaluate quality, and in early stages of roll-out. Whilst there was laboratory representation, technical experts and Board members on the taskforce, the omission of the official representatives of the professional association was felt to be a cardinal error.

"you people you always bring in the lab at the last stage. Involve them right at the planning stage." (Laboratory Board member, KII)

One Laboratory Board representative expressed that they would have designed a certificate and endorsed the training for the counsellors.

"I have even designed a special certificate that so and so is registered to carry out certain tests. Then it is signed by the registrar and the Chairman of the Board."
(Laboratory Board member, KII)

When questioned about the role of the lab all participants, including all laboratory staff interviewed, said that their role should be in quality assurance, in supervision, in training and in the development of the training documents. The increasing availability of antiretrovirals was also mentioned by many as an area that required complex laboratory monitoring, was challenging and would fully occupy available laboratory personnel in HIV.

“ARVs are a very big focus. Adding in the burden of HIV care – this is going to expand our lab in terms of tests. We are observing a situation where we are going to have a lot of work for our people” (Laboratory Association Member, KII)

6.5 Conclusion

The results presented in this chapter show the strengths of multi-methods in delineating the process of scale up. The quantitative data had raised questions of equity and quality that were explored further through the qualitative data. While rapid scale up was achieved through strategic alliances, government leadership, a registration system and the input of media campaigns concerns about equity of access and quality of scale up became of increasing importance as time passed.

Flexibility in programme design has allowed locally-designed models to flourish in Kenya. Data collected in VCT sites has informed promotional campaigns and highlighted the need to extend services to youth, couples, and rural areas. Rather than requiring that VCT occur in restricted settings, Kenya’s emphasis on universal standards has encouraged flexibility and innovation and has enhanced equity of access through service delivery to previously neglected communities and vulnerable groups.

The increasing availability of VCT through mobile and outreach services is another example of this flexibility in service delivery. Mobile services were registered with and coordinated by the DASCOS who were in turn able to involve government VCT staff from the district hospital and other sites in outreach services provided by NGOs and CBOs. The use of mobile services in remote areas has prompted innovative ways of letting people know of the service in rural areas, including travelling puppeteers, radio and mobile cinemas. Some interviewees felt mobile VCT would be an ideal way of introducing oral testing.

“We need to take advantage of new technology (such as oral testing). Let people make a choice. I think choices are good.” (female, donor, KII)

Chapter 7

A Case Study of LVCT

7.1 Introduction: strategies employed in VCT scale up in Kenya

This chapter presents a case study of one Kenyan NGO (LVCT) and analyses the direct and indirect methods used by LVCT to influence national scale up. Inferences about the potential impact of NGOs on scale up are drawn.

In order to achieve the stated aims of evaluating VCT scale up and feeding back a model applicable to other HIV services and settings, a more in-depth analysis of certain elements is required. The ‘story’ of VCT scale up so far has sketched the picture of how VCT service provision was rolled-out and analysed a nationally representative subset of VCT client data to present a picture of who is accessing services. As LVCT was a key driver in the scale up story, an analysis of its experiences may shed further light on the process of scale up in Kenya through examining the strategies of one particular organization as outlined in the methods section 4.3.1.5. As discussed in the methods, data for the case study were generated from a synthesis of diary notes, minutes of LVCT management meetings, discussion with staff and external consultants as well as secondary data and publications. The specific elements have considerable overlap and evolved over time. The data sources, with very few exceptions, have therefore not been individually referenced in the results that follow.

The management team and the staff (and after 2002 also the Board of Trustees), as well as myself as the director of LVCT, were all involved with the development of LVCT’s strategic plan and I was responsible for finding funds, supporting the work and reporting back. The LVCT strategies described below were in part driven by internal agendas and plans and in part reactive as new iterations of the strategy

allowed for flexibility. Guiding principles at the outset were to ensure the scale up of quality assured services from the outset; develop a sustainable approach for government facilities that was adaptable and inclusive of NGOs; use operational research to inform policy and further scale up in a cyclical manner. As research results became available strategies became modified, systems adapted. The LVCT strategies thus both informed the national scale up process and were informed by it, with me as participant and observer in turn, as described in the methods section 4.3.1.

LVCT has worked through a variety of strategies to influence VCT scale up in Kenya described in more detail in section 4.3.1.5 above. These included the opening and running of VCT sites whose staff and salaries were paid for by the NGO, the training and supervision of government health care workers to provide VCT alongside other services in primary health care centres and the use of operational research to feedback into policy formulation for VCT in Kenya. It has driven the quality assurance agenda for VCT in Kenya through example, through national and international publications (see Appendix A) and through gaining donor commitment and funding to establish and provide the secretariat to a National Quality Assurance Team. Four key strategies are presented in turn.

7.2 Using a systematic approach to technical assistance

Previous attempts to train HIV counsellors in Kenya had not resulted in sustainable services being established. Counsellor trainers and organizations such as KAPC (*VCT taskforce minutes Jan 26th 2001*) told the taskforce that VCT counsellors in the government sector were likely to experience burn-out and go back to their previous cadres. The results of a pilot study had shown that two essential criteria were district

buy-in to the process and the need for compulsory fortnightly counsellor support supervision (as opposed to line management)⁸. LVCT developed a systematic approach to site opening incorporating these two elements and based it on sustainability and the commitment of partners to taking over the future management of the VCT sites.

7.2.1 Developing a sustainable and replicable model for site opening

Partner districts were made aware that it would take a minimum of 6 months to institute this model in a district and up to twelve sites could be running in the district by the end of that period. LVCT aimed to integrate all sites into a national VCT system. Steps in the initial model developed by LVCT are outlined below and a summary of the basic model is then outlined diagrammatically in figure 21.

Step 1 (month 1): Site selection is conducted by DHMTs with a site selection tool devised early on in the study, that scored sites according to catchment population, commitment and availability of HIV services. A copy may be found in the appendices (see Appendix J).

Step 2 (month 2): VCT counsellor supervisor selection is conducted together with the DHMT. Applicants must be based at the district hospital and have diploma level or above in a health care profession. DHMT commits to short listing, interviews and full release of the supervisors from their previous duties. A copy may be found in the appendices (see Appendix J).

Step 3 (month 2): Supervisors are trained as VCT counsellors on a three week VCT course using the national curriculum, undertake observed practice and the exam as any other VCT trainee.

Step 4 (month 2): Counsellor selection is undertaken. Government facilities involve health centre ‘in-charges’, line managers and DHMT representatives. Staff from any cadre are considered. Classes may incorporate NGO staff or staff from mission hospitals. All are made aware of the costs of training, the examination requirements, the pass rate (or fail rate) and the need for observed practice. The quality of training was assured through the inclusion of a period of observed practice and of an exit exam. Both of these were new concepts in trainings paid for by donors. In the past counsellor trainees would be issued with certificates of attendance without an objective measure of competence.

Step 5 (month 3): Supervisors finish their basic training, open a VCT site in the district hospital and see clients.

Step 6 (month 5 - 7): Counsellor training is undertaken with the national training manual (124 hours) plus a period of observed practice. Maximum class size is sixteen with two full-time and two part-time (laboratory) trainers. Classes are residential to allow for evening sessions and practice. An exit examination is conducted.

Step 7 (month 6 - 8): Sites open and VCT counsellors who have passed their training begin seeing clients unsupervised.

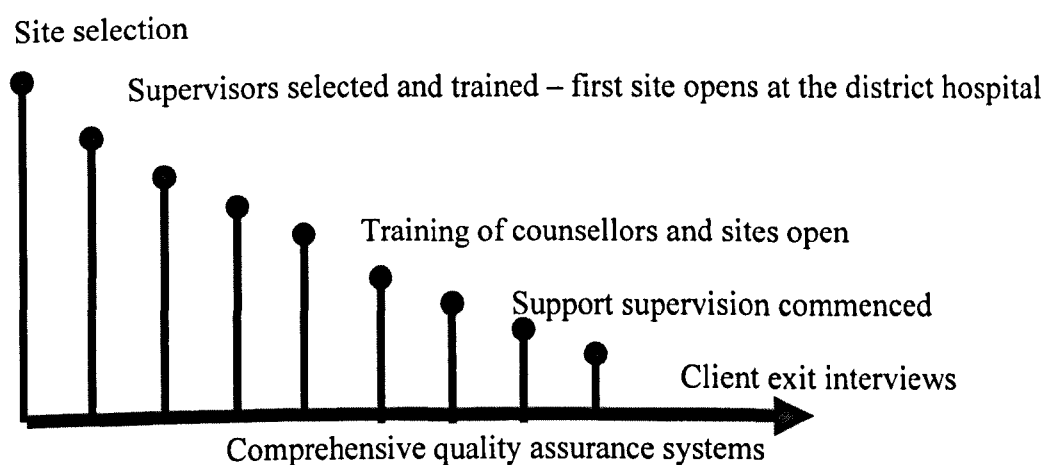
Step 8 (month 7 - 9): Regular support supervision sessions are instituted at the district hospital and run by the district VCT supervisors, who continue to see clients once a week at the district hospital site but also take time to visit other sites in the district, liaise with the DHMT, collate reports and ensure logistics are running smoothly. Clustering of services was used in order to promote greater efficiency and quality of supervision groups.

Step 9: Following a quality assurance workshop site-level QA is undertaken to train health facility staff to assess client satisfaction using exit interviews. VCT and

curative services are included. The first cycle of client exit interviews conducted and feedback is given at a second workshop. Further details of the QA system along with a comprehensive training manual and sample exit interviews may be found in the LVCT QA Manual⁸⁶.

Step 10 (after month 12): A number of further trainings are offered including training of trainers courses, refresher training courses, modules in post rape care, youth counselling and family planning. Site supervision by laboratory supervisors and inspection by DASCOS are on-going. New staff are trained to replace staff transferred out.

Figure 21: Model for VCT site establishment



The model underwent some refining after early lessons were learnt. Refinements included lengthening the time needed for supervision and QA support to 18 months per district, drafting early Memoranda of Understanding (MoUs) on exit strategies, and the need for on-site supervision of laboratory skills. The quality assurance systems were also strengthened and refined as discussed in more detail in section 7.3.

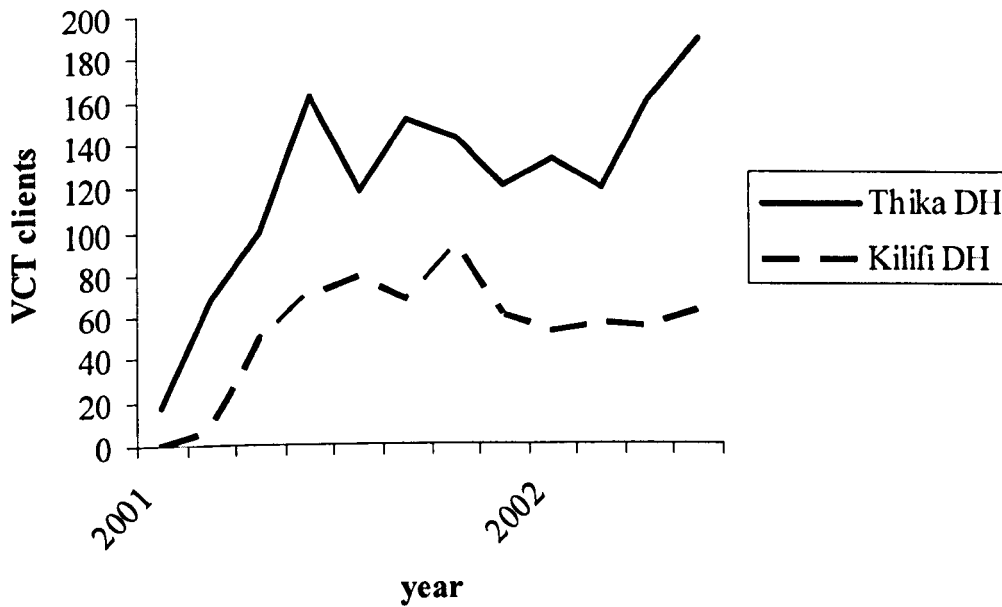
7.2.2 Learning lessons on district ownership

Lessons about the importance of district ownership were learnt and heeded early. An example of this can be seen when the client flow from two otherwise comparable district hospitals is analysed. Figure 22 below shows client flow in Thika and Kilifi district hospital sites in the first year of operations. Both districts had similar catchment areas; were among the first districts to provide VCT and had two small rooms fully dedicated to VCT counselling. The Kilifi site opened two months after the Thika site. The sites differed in that Thika had two full-time staff and two VCT supervisors dedicated full-time to VCT services and a supportive DHMT, whereas Kilifi staff were drawn from other services part-time and the DHMT were in two minds about whether VCT was a priority to them (*letters and participant observation May-July 2001*). The district had been selected by donors as it was in a USAID priority area and LVCT was foisted upon them. Kilifi has a long-standing MoU with the Wellcome Trust for paediatric services with an existing model of technical assistance that included salary supplementation for government staff, not offered in LVCT's package of 'sustainable' technical assistance.

The graphs show an initial parallel increase in client flow followed by a plateau and even a decline in Kilifi district at the time when LVCT was decreasing support as agreed in the initial Memorandum of Understanding with the DHMT. This fall off in client flow was seen at the same time as a national mass media campaign for VCT was commencing, billboards were going up along the coastal road near Kilifi and lists of sites for VCT included Kilifi district hospital. Clients were purportedly arriving at the site to find the door locked and trained VCT counsellors busy at work in other parts of the hospital. It took some years for the DHMT to see the need for VCT

services, which are now run by the Wellcome Trust Unit in conjunction with the International AIDS Vaccine Initiative (IAVI) as a recruitment study for future vaccine efficacy trials.

Figure 22: VCT client uptake at Thika and Kilifi District Hospitals in the first twelve months of operation



A sense of ownership by the district (in that VCT became a normal part of the activities of the DHMT), was fostered by a minimalist presence of the LVCT technical advisors who gave periodic support without overwhelming district staff. These minimal visits also had the effect of avoiding creating expectations for a “piece of the donor pie”. A modest sum of 20,000 KSh (approximately £150) was given to each district per month to support counsellor supervision visits and groups. This small injection of funds was a sum that DHMTs agreed was feasible for them to maintain after the expiry of MoUs. The supervision style: emphasizing joint inquiry, problem solving and education rather than control also served to foster ownership and motivation was maintained through opportunities for staff training.

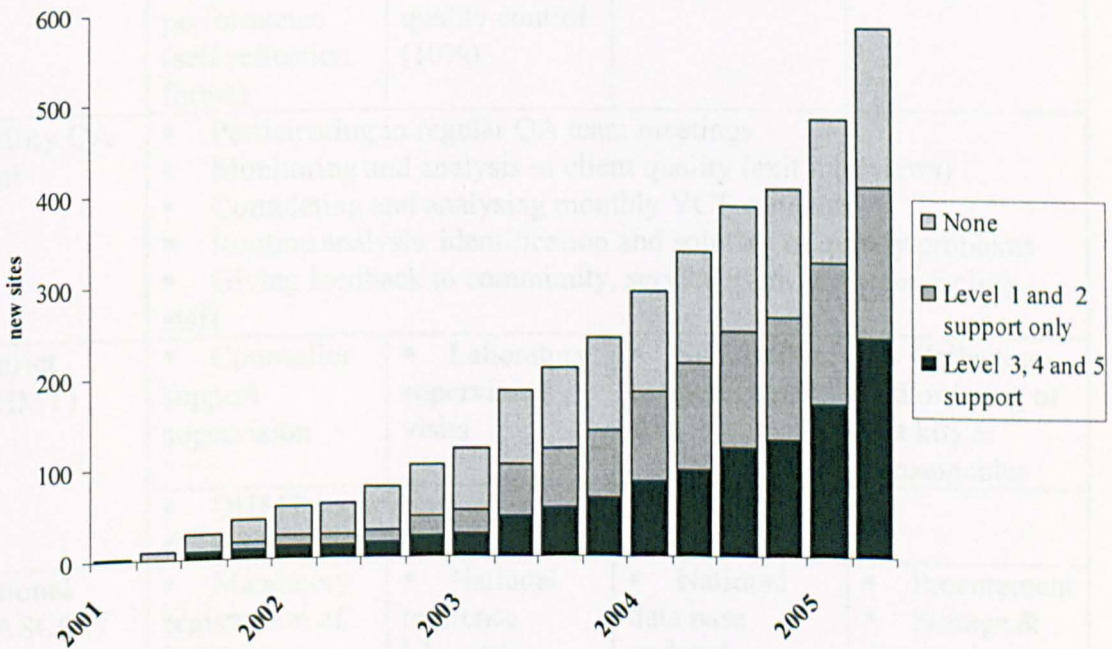
7.2.3 Using both 'additive' and multiplier' strategies

As outlined in section 4.3.1.5 it was possible to grade the technical assistance offered by LVCT into five levels. Level 5 sites such as stand-alone LVCT sites had the most input. At the start of scale up three pilot sites were still functioning with full technical assistance from LVCT (level 5 support). In 2001, LVCT acted to influence scale up through the direct addition of 18 new sites (an additive phase). Sixteen of these were government health facilities selected by the DHMTs, with staff released from other duties and salaried by the government. These 16 sites were supported through training, supervision, quality assurance and data entry (level 4 support). An additional two stand-alone sites (one in Nairobi and one in Malindi) were opened with donor salaries through LVCT (level 5 support).

Lessons learnt from the additive phase were being fed back in real time to taskforce meetings and the subcommittees for VCT guidelines and training curricula. LVCT was thus able to use its experiences to influence national policy and 'multiplying' the LVCT model. From 2002 onwards LVCT continued to add a limited number of new sites at the same time as agreeing Memoranda of Understanding with existing sites on future sustainability and gradual weaning of LVCT support. The weaning of support from districts reflected the beginning of LVCT's strategy to work through training of trainers and training of supervisors, thus encouraging districts with higher levels of support to assist neighbouring districts to open and maintain sites. Thika District was the first to do this and its LVCT trained trainers assisted NASCOP in the training and supervision of sites in neighbouring Maragua District in 2002, similarly trainers from Malindi District (trained in the same ToT course as Thika) supported Tana River District in site establishment in 2003.

With time, many other districts benefited indirectly from LVCT’s policy of prioritising NASCOP and district staff in the training of trainers and districts established VCT sites with government support alone. They requested only limited (if any) support from LVCT in areas where they felt there was a gap such as the establishment of quality assurance and supervision systems (levels 1 and 2 support). The result of the ‘multiplier phase’ of LVCT was thus to catalyse other organizations and districts to open sites. The effect this had on scale up nationally is represented not only by the maps of increasing VCT coverage nationally (see figure 6 in section 5.3 above) but also graphically in figure 23 below.

Figure 23: proportion of sites nationally receiving technical assistance from LVCT by level of support



7.3 Integration of quality assurance

Following the pilot phase⁸, LVCT aimed to build quality into the design of VCT services at the onset of scale up and to influence national scale up through example as well as through policy development. A comprehensive quality assurance programme was developed in stages beginning with facility-level exit interviews and national-level registration systems as laid out in table 7 below.

Table 7: Suggested roles and responsibilities in comprehensive quality assurance of VCT

Level	Counselling	Testing	Records	Supplies
Community	<ul style="list-style-type: none"> ▪ Advocacy through health centre committees ▪ Feedback through community meetings ▪ Conducting client exit interviews with service users 			
Counsellor and laboratory technician	<ul style="list-style-type: none"> ▪ Attending group and individual supervision ▪ Monitoring own performance (self reflection forms) 	<ul style="list-style-type: none"> ▪ Adhering to standard operating procedures ▪ Collecting of samples for quality control (10%) 	<ul style="list-style-type: none"> ▪ Accurately completing laboratory records and National VCT data forms 	<ul style="list-style-type: none"> ▪ Timely ordering of new test kits and reagents ▪ Use of in-date kits
Facility QA team	<ul style="list-style-type: none"> ▪ Participating in regular QA team meetings ▪ Monitoring and analysis of client quality (exit interviews) ▪ Completing and analysing monthly VCT statistics ▪ Routine analysis, identification and solution of quality problems ▪ Giving feedback to community, service users and other facility staff 			
District (DHMT)	<ul style="list-style-type: none"> ▪ Counsellor support supervision 	<ul style="list-style-type: none"> ▪ Laboratory supervisory visits 	<ul style="list-style-type: none"> ▪ Submission of aggregated data 	<ul style="list-style-type: none"> ▪ Collecting and ordering of test kits & consumables
	<ul style="list-style-type: none"> ▪ DHMT supervisory visits ▪ DASCO/VCT Coordinator supervisory visits 			
National (NASCOP/DSRS)	<ul style="list-style-type: none"> ▪ Mandatory registration of VCT sites ▪ Voluntary accreditation of VCT sites ▪ Set National Standards 	<ul style="list-style-type: none"> ▪ National reference laboratory quality control 	<ul style="list-style-type: none"> ▪ National data base updated 	<ul style="list-style-type: none"> ▪ Procurement ▪ Storage & distribution (KEMSA)

Tools for exit interviews and for site registration were developed through a collaborative process by simultaneously working with service providers and national policymakers. A more detailed account of these processes, including examples of the tools developed may be found in sections 7.3.1 and 7.3.2 below as well as the Quality Assurance Manual published by LVCT⁸⁶. In contrast to the guidelines, which were developed through a fully collaborative process, the National QA team took up and adapted this LVCT in-house QA manual.

7.3.1 Facility level QA was developed

Service providers in 20 districts were engaged in developing and using basic QA systems to monitor, assess and improve quality at facility level. Key approaches included:

- Client exit interviews – facility staff decided on questions for the exit interview and engaged volunteers to conduct 100 interviews every 6 months. Data were analysed, improvements made and re-surveyed in a cycle. Both VCT and curative services were included in the interviews and examples of changes made include planting a garden, firing a rude watchman or altering opening times.
- Data summary sheets
- Supervision
- Refresher training

The involvement of other services (such as curative care) in the health centre meant that the impact of facility-level QA was felt beyond VCT. This supported the integration of services and had a positive influence on staff morale. The role-modelling of VCT sites with facility level QA soon led to independent requests from other districts direct to LVCT for support in improving the quality of VCT sites by

introducing its 'quality ethos'. This is reflected in figure 23 above through the increasing number of sites requesting level 1 and 2 support for QA and supervision training respectively.

7.3.2 National level QA was developed

Based on the agreed VCT Guidelines, national level decisions were made by the VCT taskforce on the following:

- site registration (minimum standards based around inputs),
- annual licensing (minimum standards based around inputs and processes)
- voluntary accreditation (standards covering structure-process-outcome measures).

This set out to protect against harmful/unsafe practice and to recognise those sites that complied with and exceeded minimum standards based upon National VCT guidelines.

An iterative process of piloting /testing of these registration systems was undertaken before launching it as a national programme. Sites were visited by a team coordinated by LVCT and comprising national, provincial and district representatives, including laboratory and counselling expertise as well as a member of the LVCT QA department. Data collected from these visits was kept in a formal register at NASCOP in exchange for free test kits. Sites given accreditation all had to have an active QA team, and to be involved in the regular monitoring of client satisfaction and other service quality indicators at facility level. While the site registration tool became widely used almost as soon as it was developed, the accreditation tools did not gain widespread acceptance until 2005 (see section 6.2.4 above).

The involvement of NASCOP from the outset ensured ownership and long term sustainability of the programme in Kenya. The establishment of a National Quality Assurance team in late 2003 was key to this - it was able to advocate for resources in its own right, to come up with a National Strategy for QA and to decentralise the process of registration to trained provincial and district AIDS coordinators. As a result the Kenyan QA system is unique. Kenya is the only country in sub-Saharan Africa with a comprehensive national system and strategy for VCT site registration, licensing and accreditation. Public confidence in registered sites is high and the system has ensured that the National VCT Guidelines in use and adhered to by all registered sites. The NQAT strategy documents have set out a working definition of VCT quality in Kenya as:

A definition of quality VCT in Kenya

"The ability of the VCT services to meet the needs of clients and providers, in an equitable and acceptable manner, within the resources available and in line with National Guidelines".

7.3.3 QA of testing

The quality assurance of HIV testing was incorporated into VCT scale up as described in section 3.5.3 above. However, failure of effective use of the filter papers and the lack of continuing supervision of lab testing after 2001 meant that there was little feedback to sites and it became all too easy for site counsellors to get complacent about standard operating procedures. LVCT, under the umbrella of the VCT taskforce's NQAT worked to ensure that testing quality was an integral part of the comprehensive QA in Kenya through refresher training and through on-site laboratory supervision by laboratory technicians and technologists.

7.4 Influencing policy and the role of operational research

The origins of LVCT were as a research project. A pilot started in 1998 and progressed in 2000 to an operational research study on VCT scale up from 3 to 21 sites. LVCT has kept a strong focus on backing up its practical work with operation research and using the results as a strategy to influence national policy. It has maintained a research department, which supervises operational research studies in counselling and testing, post rape care and HIV treatment. Examples of how LVCT's operational research has been able to influence national and international policy are outlined in table 8 below.

Table 8: Examples of LVCT's Operational Research Informing Policy

Year	Study name	Policy Changes	Documents
1998	Feasibility and acceptability VCT primary health centres ^{8*}	National strategy of 5 sites in every district National VCT guidelines	7,10
2001	Quality assured scale up in GoK facilities ⁸⁶	National Training Curriculum	11
2002	Registration and Accreditation pilot study	Registration and accreditation tools agreed nationally National Quality Assurance Team established	86
2003	Cost study ¹⁶⁷	Work with CBOs and NGOS, expand models of service delivery	167
2003	Rapid Oral Testing ¹⁸⁷	Expand modes of testing nationally amongst youth	
2004	Comprehensive post rape care ²⁰⁰	Post rape Care Guidelines	201
2004	Barriers to women accessing VCT ¹¹⁴	Female condoms Post-rape care services	
2006	Female Condoms in VCT sites ²⁰⁰	Provision of female condoms in VCT sites through UNAIDS grant	
2007	National VCT data collection systems ¹⁸⁸	Complete dataset at NASCOP	

* This represents the pilot study conducted by Dr Gilly Arthur that preceded the formation of LVCT as an NGO.

7.5 Addressing equity issues through research, monitoring and evaluation

Building on its operational research, LVCT incorporated strategies to promote equity through regular analysis of disaggregated data. Data are currently analysed quarterly by age group, sexual orientation and disability (in particular deafness) in addition to that required by NASCOP of HIV status and gender. As a result LVCT has developed and changed its programme to better meet the needs of vulnerable marginalised groups and to try to tackle barriers to accessing services. Its position as an NGO has allowed it to respond flexibly to the needs identified, filling important gaps that it would be difficult for formal government systems to respond to (such as with sex workers, drug users, men who have sex with men (MSM) etc).

7.5.1 Programme strategies to remove barriers to women accessing VCT

The results of a gender analysis¹¹⁴ have fed into a number of programmatic responses. Firstly the opening of comprehensive post rape care services linked to eight district hospital VCT sites in Kenya. In Thika District hospital, the rate of reporting rape was 10 times higher in the three months following the introduction of comprehensive post rape care services than those reporting rape to VCT counsellors in the three preceding months.

Secondly, counsellors have started the active promotion of female condoms through demonstrations in VCT rooms. LVCT sites started free distribution of female condoms increasing choice and control for female VCT clients²⁰³. The response so far indicates a need for the active promotion of this female-controlled method through mass media, government commitment and free distribution, as has been the case for

male condoms and recent large-scale government requests for donor funding are seeing this come to fruition in Kenya²⁰⁰.

Thirdly, the training programmes and national curriculum have been adapted to allow more time in training counsellors in imparting skills of condom negotiation, disclosure and couple counselling.

7.5.2 Programme strategies to remove barriers to youth

Data analysis of VCT uptake by the 15-24 age group showed high rates of uptake in both men and women (see section 5.4.2 above) and encouraging trends in the uptake of youth. Youth friendly sites in particular were found to attract young people. LVCT responded with a youth programme combining a free telephone hotline with 5 stand-alone youth VCT sites in Nyanza and 3 youth-led CBOs, trained and supported to provide youth-friendly services. Formative research, including focus group discussions with youth, was used as a basis for the programme, which had flexible opening hours, youth counsellors and a resource centre with recreational facilities in two sites.

7.5.3 Programme strategies to remove barriers to men who have sex with men

(MSM)

Male homosexuality is illegal under Kenyan law and the sexual health needs of MSM have not been included in government public health campaigns^{9;158}. Furthermore, many MSM perceive that they are at low risk of HIV and STIs and condom use is low among this community²⁰⁴. VCT and care services that are sensitive to the needs of MSM are largely absent, despite a large hidden gay community²⁰⁵ and only 1%

(664/66700) of male VCT clients in the LVCT data admitted to the VCT counsellor to having had sex with men. It is likely that many MSM with HIV symptoms and/or STIs do not access care, delay seeking care or self-medicate.

Whilst a number of small networks and organizations of MSM exist throughout Kenya, they do not possess the capacity to deliver prevention or care programmes. LVCT therefore began working with MSM in Kenya in the year 2003. A drop-in VCT service and a free telephone information and advice line for MSM and members of sexual minority groups were established. LVCT has guidelines for VCT and care staff in delivering MSM sensitive services and the programme has facilitated an MSM Advisory Committee in Kenya.

7.5.4 Programme strategies to remove barriers to deaf people

There are approximately 500,000 deaf people living in Kenya. However, estimates based on enrollment in schools and voluntary organizations for the deaf vary widely and there are few accurate statistics available²⁰⁶. Currently in Kenya there is no research describing the HIV risks or prevalence rates among the deaf. While it is known that disabled people in Africa are vulnerable to sexually transmitted infections (STIs) and HIV infection²⁰⁷ and deaf women and girls are particularly vulnerable to abuse²⁰⁸, the deaf in Kenya are not captured in national statistics on HIV¹⁶¹. Also the current HIV/AIDS campaign strategies do not take into consideration the specific needs of the deaf²⁰⁹. There were no HIV/AIDS curricula or training materials in sign language and no sign language interpretation of HIV/AIDS television programming or meetings prior to the establishment of the HIV counselling and testing programme for the deaf in 2003. Posters and other written materials were inaccessible due to high

rates of illiteracy and poor understanding of written Kiswahili among educated deaf persons who are taught to read in English. Local deaf-led education efforts in HIV have been further hampered by the existence of four separate sign languages in common use in Kenya.

LVCT became the only VCT organization in East Africa offering specific services for the Deaf. Details of the programme establishment and the data from the first 1709 clients are being published elsewhere. A key strategy used was to develop VCT services for the deaf that were run by the deaf. The rationale for wanting deaf service providers sprang from the need to accommodate the separate language and culture of the deaf community as well as the positive role-modeling this would create for potential service users and was the initiative of deaf community members and organizations in Nairobi in 2003. An additional strategy, based on how information is spread in the deaf community in Kenya, was to develop a comprehensive peer education programme alongside the VCT programme. The success of this was demonstrated by uptake of services by deaf clients and the high proportion of deaf clients, when compared to hearing clients at the same sites, who had heard of VCT through a peer educator (OR 15.1, CI 12.6-18.3, $p < 0.001$).

7.6 Conclusion

The strategies employed by LVCT and revealed through the case study were to use a systematic and replicable approach to technical assistance, to pilot and support a comprehensive quality assurance programme, to use operational research to inform policy and to use innovative programming to respond flexibly to research findings.

Kenya's emphasis on universal standards brought about as a result of LVCT's own emphasis on quality assurance has encouraged flexibility and innovation and has enhanced equity of access through service delivery to previously neglected communities and vulnerable groups, such as the deaf, refugees, prisoners, and nomads. The quantitative data (chapter 5) revealed that VCT in Kenya has become a service that attracts more men than women, and innovative programming responses, such as the introduction of post rape care services in VCT sites and the supply of female condoms, are required given the higher rates of HIV prevalence in women.

Chapter 8

Discussion

The discussion that follows interprets the results (chapters 5-7) in the light of the methodological approach (chapter 4) and the Kenyan context (chapter 3) presenting new data that add to existing experiences of scale up (chapter 2). It is presented in five sections.

Section 8.1 discusses the challenges of providing optimum VCT coverage in Kenya. It reflects back on the literature review, the methodology and the Kenyan context in which scale up of VCT occurred, exploring the need for strategic thinking by government, donors and other partners in the scale up of service provision.

Section 8.2 discusses the challenges of achieving optimum VCT uptake in Kenya. It demonstrates the strengths of multi-methods in operational research by focusing on the quantitative results (service provision and coverage), linking these to the qualitative insights and rooting them in the Kenyan and international contexts.

An in-depth analysis of the challenges of quality assurance are reviewed in **section 8.3** showing that demonstration of best-practice can be an effective tool for influencing scale up. The focus of LVCT on quality providing a spring board for discussion of the successes and tensions of the *process* of VCT scale up nationally and illuminating trends in the quantitative and qualitative data.

In **section 8.4** the challenges and limitations of the thesis methodology are discussed. The role that the participant observer may have had on the results is explored and further unanswered questions raised by the results are posed.

The chapter concludes in **section 8.5** with a discussion of aspects of the findings that are relevant to scale up of other HIV services and to the scale up of VCT in other countries: allowing the reader to synthesise lessons learnt and consider their applicability to other settings with which they are familiar.

8.1 The challenges of providing optimum coverage

The VCT studies reported in the literature to date (section 2.6)^{5,8,129,131, 210} are primarily quantitative and describe limited numbers of pilot sites rather than widespread provision of services. There is little qualitative data on achieving VCT coverage and no published studies that combine data from both methods. This section explores the need for strategic thinking in scale up; the mistakes that were avoided and made (based on what was already known in the literature) and the new lessons learnt in Kenya (taking forward the literature) on models of services, site location and distribution. Table 6 (chapter 6 above) summarises the contribution of the qualitative findings to the existing literature.

8.1.1 Maximum coverage was a government priority

Kenya successfully employed a ‘top-down’ approach to VCT scale up (see section 2.2.1). Decisions were made by the national task force, guidelines were disseminated through the provincial to the district levels and sites were registered through the National AIDS and STD Control Programme. Based on the results of a pilot study in Kenya, the government chose to lead the roll-out of VCT through its primary health care systems with the aim of providing a more equitable service with broad coverage. In keeping with their stated aims⁹ and with experiences elsewhere³⁴ this approach is likely to have contributed to achieving the widest coverage of VCT in the region with

over 950 sites by mid 2007 (personal communication, NASCOP, June 2007) and to have built a sustainable system. The degree of coverage and the full integration of VCT into government health systems could not have been achieved without the leadership, commitment and coordinating role of NASCOP as an institution and the head of NASCOP as an individual.

Kenya's public health approach to VCT scale up had implications for the broader provision of essential health services: staff were given time off work to attend VCT training and supervision. Many were drawn away from their normal duties in their original cadre (such as nursing, physiotherapy, laboratory work etc) to take on VCT counselling, leading to further shortages in the already overstretched primary health care systems. Kenya's decision to take a middle path (allowing a limited number of vertical programmes to be co-located in primary health care centres) was a sensible interim step as was the flexible way health personnel from a variety of cadres (not just nursing) were selected. In a mirroring of the history of family planning programmes in Kenya (see sections 2.2.1, 3.2.1 and quote in section 6.2.1), many VCT sites in Kenya are undergoing a shift²¹¹. From being perceived as vertical programmes co-located in health centres, VCT sites are increasingly integrated into health centres with trained and salaried government staff providing the service. Financial support for human resources to sustain this approach is increasingly being incorporated in proposals such as the Global Fund¹⁵⁶ although so far no significant long-term support for HIV counsellor salaries has been obtained.

8.1.2 Threats to maximising and sustaining VCT coverage

Progress through the public health approach in Kenya was hampered by the lack of a clearly documented strategic plan for VCT scale up, the failures to engage with the laboratory seniors, to commit to a cadre of counsellors or to develop functional data and evaluation systems.

The lack of strategic planning meant that strategies evolved over time (there was frequent talk of *'building the ship while the raft is already floating'*). While this allowed for openness and flexible response to needs, it also meant that there was a relatively greater influence of donors and/or individual personalities. The retrospective VCT strategic planning exercise conducted in 2004 meant that from a government perspective, much of the first three years of VCT scale up were reactive rather than pro-active. Decisions to include new sites were based purely on a first come first serve basis and initial progress with VCT coverage reflects a combination of the donor priority areas (see section 5.3), the location of NGO headquarters and constituency driven demands.

As well as the lack of strategic planning for VCT scale up, a further critique of the so-called 'top-down' approach is that it limited the opportunities for site staff and data to feed into national policy processes and direction. For example, it became increasingly clear at the facility-level that the development of a cadre of counsellors would have been a critical early step in sustaining government-led scale up (see section 6.4.3 and table 6). While the lack of cadre shouldn't stop governments starting to provide HIV testing, the ultimate success of such programmes depends on staff competency and professionalism and should not be made to rest on their willingness. A cadre of

counsellors would allow for non-health care professionals to be trained through recognised training colleges and additional short courses or modules could then be developed for interested health care professionals to transfer cadre. Once established, the trained HIV counsellors could rotate between HIV testing areas including VCT, PMTCT, diagnostic testing and post-rape care. As well as being a route for professional growth and development, a cadre would increase morale amongst counsellors and prevent burn-out, retaining staff for longer and reducing training needs. Despite many valid arguments for a cadre, no terms of services were drawn up or curriculum developed. This development was hindered more by the embargo on hiring health professionals and the fear (shared by donors and government) of not being able to pay salaries long-term, than the lack of commitment by medical and counselling training institutions.

Testing and laboratory issues became a threat to the government's leadership of the VCT scale up process in Kenya (see sections 6.2.3 and 6.3.5). The earlier involvement by the government of the laboratory fraternity was recommended by many of the government employees interviewed but might have hampered rapid scale up. While most people felt that bringing the Laboratory Board and Association members to the taskforce in an official manner from the onset of scale up would have prevented the conflict, it is very possible that their presence may have prevented the use of lay counsellors for testing in any setting and therefore inhibited scale up in the public sector. My personal experiences of consultancy work in other countries including Malawi, Nigeria, Rwanda and Uganda, was that the insistence of laboratory professionals that HIV testing could only be conducted by laboratory staff significantly affected VCT scale up potential.

A functional VCT data management system for VCT in Kenya has yet to be established. Simple descriptive data reflecting basic uptake disaggregated by age, gender and HIV status only was attempted but even these records were found to be missing up to half of the national data¹⁸⁸. Figures of national uptake are therefore round numbers based on estimates. Analysis of information collected on the official national data collection form (designed by NASCOP and filled in at every site) is conducted only by donors, NGOs and other university partners. The national statistics, including those published in national documents, are regularly based on these subsets¹⁶¹.

National VCT evaluation plans were nominal in Kenya; designed for the benefit of potential donors rather than to provide feedback on service utilization to programme designers and policy-makers. Furthermore the indicators were not gender sensitive^{60;61} and did not take issues of access or at risk populations into account⁶². Rather the reporting focus was on geographical coverage and numbers tested. The retrospective collection of basic data that was required from facilities was expensive and time consuming¹⁸⁸. Taking into account the difficulties experienced in Kenya and similar struggles with the VCT data in neighbouring Uganda⁵⁹ it is likely that simpler data returns would have worked better nationally, with the research agenda being served separately by the more complex data collection forms. In other words, only information that is useful for monitoring and evaluation purposes should be collected. Innovative methods such as carbon copies and hand held palm pilots are being utilized in some Kenyan sites to minimise the impact of data collection on the client/counsellor relationship, to reduce the work load on the counsellors and to reduce transcription errors.

Functional data systems and evaluation plans would have contributed to a better understanding in Kenya of the difference between maximum and optimum VCT coverage. While the government priority was to open as many sites as possible, there was little discussion of when to stop opening new sites and to focus on quality of existing sites instead. There was no policy on whether the number of sites in a given areas should be restricted and no data on which to base these decisions. There was only limited understanding of what factors contributed to optimum coverage. Further exploration of the differences between maximum and optimum coverage are discussed in the sections on geographical distribution (see 8.1.6) and equity of uptake (see section 8.2.3) below.

8.1.3 The donor influence on VCT coverage

The relatively large number of donors funding VCT scale up in Kenya and the amount of funding devoted to the exercise inevitably meant that differing approaches and strategies were used. This had the potential for clashes between donors but with time led to complementarity. For example DfID only supported VCT sites to open in government health facilities; FHI supported a mixture of service modalities and CDC encouraged the provision of stand-alone and mobile services either directly or through partner CBOs and FBOs. International policy on HIV and the ‘trendy’ money committed to HIV have acted synergistically to catalyse action on HIV in Kenya. However, they have also had a negative impact in allowing the donor community too much control over strategies and implementation of VCT scale up (see section 2.2.3).

Firstly, the focus on numbers and the need to report both financially and against indicators may have led to more interest in the quantity of clients getting to know

their HIV status than the quality of the counselling interaction or the equity of access to services. It encouraged partners to open sites in Nairobi where there were 'low hanging fruit' and high client flow could be achieved for less work. During 2002, CDC began remunerating partner organizations on a per client basis and rumours of falsification of client data were rife.

Secondly, the donors in Kenya were dictating the geographical focus of VCT scale up from the outset with individual donors having a disproportionate influence. The high proportion of American government funding for VCT scale up in Kenya through PEPFAR led to a significant financial support being lent to faith-based VCT sites²⁷ (which do not allow condom distribution to accompany knowledge of HIV status) and to unproven abstinence campaigns⁴² (see section 2.2.3). Funding was withdrawn from VCT partners that had any connection with termination of pregnancy. The Family Planning Association of Kenya therefore lost funding, threatening the VCT service provision in at least 8 youth-friendly sites across the country.

Thirdly, the donor policy of not providing salary support was mentioned frequently in interviews and meetings. The embargo on hiring health care workers¹⁵⁵ (see section 6.3.4) meant that other health care staff were taking on an additional workload each time a member was released from other duties to do VCT. The alternative use of per diems was often regarded as a salary supplement and had the knock-on effect of destabilising the workforce in health centres through frequent absenteeism from the sites as staff attended workshops for the sake of the per diems and jealousies about who was selected for which workshop and why.

Finally, the donor policy of working through NGOs led to a burgeoning of inexperienced local NGOs. All were hoping for a slice of a ‘HIV cake’. These often fronted small-scale pilot projects (or ‘boutique interventions’ see section 2.4.3) and they often duplicated each other’s efforts. Due to reporting requirements many became more accountable to their donors than to the government and feedback and evaluation systems in government remained weak (section 8.1.2 above).

8.1.4 Strategic partnerships and alliances increased coverage

The success of VCT scale up in Kenya owed much to a symbiotic relationship between government, donors and NGOs. While the donors clearly had a lot of influence in the Kenyan VCT process (see section 8.1.3 above), the role of government leadership in these alliances emerged clearly from the qualitative research findings in section 6.2.2 above. The VCT taskforce provided a meeting point that gave opportunity for NGOs to influence policy through feedback of experience. It also allowed for mainstreaming, for example of the quality assurance systems, to realize a greater impact through the participation of all the partners.

The Kenyan QA system for VCT also contributed to successful collaboration. It allowed individual partners to make innovative local adaptations in response to change as new technologies and new knowledge emerged. These innovations could then be evaluated and incorporated by other collaborating partners. For example the use of rapid oral testing¹⁸⁷ was piloted in mobile services and adopted by CDC partners in some sites, the development by LVCT of services for the disabled was expanded to other partners and the use of client exit interviews as part of quality assurance systems (discussed in section 7.3 above) was adopted by numerous

organizations wanting to achieve higher marks at annual licensing visits from NASCOP. This responsiveness and the links to operational research meant that Kenya was able to promote equity through improving access by listening to community needs. Just one example of this was the flexibility in opening hours shown by many sites with longer hours on market days in some rural sites, evening openings for youth and for working people in urban areas and twilight sessions for truckers and commercial sex workers along the Mombasa highway.

Successful scale up of VCT in Kenya benefited from multi-sectoral working approaches and mainstreaming^{57:62} (described in section 2.3.1 above). The collaborative (see section 2.3.1) and also the competitive (see section 2.4.3) nature of this approach allowed the partners in Kenyan VCT scale up to learn from each other with no one wanting to be left behind. However, there was a downside too; participant observation identified rivalries and jealousies between VCT organizations that should be natural allies because of competition for funds and for recognition of their approach (see section 6.2.2 on the development of the curriculum and sections 6.2.2 and 6.3.5 on the laboratory organizations).

8.1.5 The role quality assurance in all models of service delivery optimised coverage

The government also encouraged the provision of services by partners through alternative models such as stand-alone sites and mobile outreach programmes whilst maintaining oversight through registration and annual licensing. This flexible response allowed ultimate coordination, control and strategy to rest with government and was only possible through the development of a comprehensive quality assurance system, not previously described in the literature (see section 2.3.7). The key finding

of the thesis as regards the models of VCT was that quality assurance of services had a far greater role to play than choice of service delivery model. The same quality of service is likely to have the same impact regardless of mode of delivery. Nevertheless a number of additional useful lessons add to the existing literature summarised in section 2.6.2 on service delivery models and are summarised below.

The data represent a variety of service provision models and indicate that a balance of models is required for a sustainable national programme. The over-reliance of previously reported VCT studies and other pilot interventions on data from stand-alone sites⁵ makes the assumption that this model is suitable for every setting. In our data, stand-alone sites were primarily located in urban areas and health facilities sites or mobile outreach sessions primarily in rural areas. Municipalities were served largely by sites in the district hospitals. Differences of location were correlated closely with the model of service provision and also with cost. During the timeframe of the study and immediately preceding it, a number of costing studies were conducted to assess the different models of service provision, the results of which indicated that health facility sites and CBO-run sites were the most cost-effective models^{7;167}. Information from the stand-alone sites suggests that it costs about \$15 per client for VCT services, including rent, salaries, and quality assurance. In health facilities and CBO sites costs ranged from \$10 to \$13¹⁶⁷.

In keeping with the experience of other countries¹²³⁻¹²⁵ the **stand-alone** sites saw more than twice as many clients as health facilities on average and attracted high numbers of young men. The stand-alone sites located in urban areas saw close to three times as many clients as health facilities in urban areas. An advantage of the stand-

alone sites was that they were able to respond flexibly to need. The sites were all located in areas of high population and HIV prevalence where need was high. Through providing salaries, (level 5 support– see section 7.2 above) sites were able to achieve adequate staffing levels and rarely turned away clients. Increased access for in-school youth and the employed was achieved through operating flexible opening hours. Stand-alone sites were also able to provide efficient services specifically targeting certain groups such as the Deaf, MSM or youth (see section 7.5 above).

Counselling quality at the stand-alone sites was guaranteed through training and in-house quality assurance measures (see case study section 7.3 above) and the non-medical focus allowed the use of lay counsellors, a flexible innovation that was popular with clients and relieved pressure on human resources in the government sector. Furthermore, unlike the government sector, staff at stand-alone sites were on probation and knew that their continued employment depended on performance reviews. This use of trained counsellors who were not health workers, combined with the comprehensive quality assurance systems, allowed for extension of VCT to other non-medical sites. Numerous small organizations, whose mandates were in areas such as HIV education and home-based care, requested assistance in setting up VCT services. By June 2005, community-based organizations working through LVCT support operated 11 registered VCT sites. Churches and mosques also became involved with faith-based organizations operating 8 sites (3 of which were registered CBOs).

However, the stand-alone sites included in this study had high establishment and operating costs and required long-standing external funding¹⁶⁷. Providing services

only through this model would not provide sustainable solutions to a government-led programme.

A more sustainable solution was to locate sites in government **health facilities** in both urban and rural areas. In rural areas the village health centre was the primary mode of service delivery, in municipal and urban areas the district or specialist hospitals were used as well as health centres. The successful involvement of the DHMTs described in chapters 6 and 7 above allowed for full integration into the government system. Salaries, administration and line management were all handled through the government systems. Currently in Kenya VCT has become an integral part of the primary health care systems threatened in the long-term only by the absence of a cadre of HIV counsellors (see section 6.3.2 above).

An advantage of placing VCT in government health facilities was that it promoted VCT as a general health service and allowed internal referrals. Patients who visited the health centres for other services were exposed to knowledge of VCT by the health care workers (see section 5.4.5). The relative importance of this method of promotion in health centres was highest before the start of the mass media campaign (see table 4).

While many clients initially had negative perceptions of the quality of services offered in government health centres, this is not borne out by data from the client exit interviews (section 7.3). The DASCOS' wider responsibility for VCT sites through registration and comprehensive QA allowed health facility VCT providers to see that

they were offering a quality service alongside others in their district rather than feeling like the poorer cousin.

Health facilities provide an efficient, affordable and sustainable service which increases coverage and normalizes the concept of HIV testing as a local health service and they should form the backbone of a national scale up. However, there remains a need to complement what they can offer with other models of delivery since the integration of VCT in health facilities has the potential to divert scarce human resources away from other services affecting both the quality of VCT and of other services. For example, health facilities had fewer staff dedicated to VCT (section 5.4.5) and were unable to see the volume of clients seen through stand-alone and mobile services.

Kenya has pioneered extensive **mobile VCT** to meet the demand among remote and rural populations but funding for this method was commenced in late 2004 and data in this database are insufficient to draw many conclusions about the this mode of service delivery or its sustainability and cost.

In practice there was found to be considerable overlap in the definitions of ‘stand-alone’ and ‘integrated’ sites. Some ‘integrated sites’ functioned effectively as stand-alone services co-located within a health facility. Furthermore, increasing overlap with stand-alone sites was observed as more and more of these added HIV care to the services they offered. To avoid confusion the term ‘integrated’ has not been used in this thesis although a better understanding of true integration would be found from further analysis of referral data and through qualitative research focussing on the

subset of sites in rural and municipal health centres that functioned as an integral part of their health facilities.

Regardless of the site type, all services are under the umbrella of the national quality assurance system, which also allowed for a unique regulation of VCT in private facilities in Kenya. The incentive of free kits encouraged private sites to register and the extension of the DASCO's role in QA encouraged them to maintain standards. A limited number of sites, including private facilities, were actively deregistered.

The data presented therefore only go part way to confirm previous theories (see section 2.6.2) that the choice of model for VCT service provision depends upon a programme's goals¹²³. It seems more likely that the quality assurance umbrella has a strong role to play. The data describe how the development of a comprehensive QA system allowed for innovative, locally developed models to flourish during scale up and thereby promote equity of access through responsive approaches. Nationally, a variety of approaches is required and any model which is quality assured and sustainable is likely to be successful.

8.1.6 The need for planning VCT site location and distribution to enhance equity in coverage

The maps in section 5.3 (figure 6) and insights from the qualitative data reveal that site distribution does not appropriately reflect need as defined by HIV prevalence, population density and access for vulnerable populations. There remains an uneven distribution of sites with urban areas, especially Nairobi, being best served. The lack of

early strategic planning, conditional funding to donor priority areas and the political imperatives associated with visible new services may all have contributed to this.

While there has been a rapid increase in the number of new sites and new districts offering services, there has been little discussion nationally about what optimum coverage is or how many VCT sites Kenya actually needs. This is particularly pertinent in the current climate of expansion of access to HIV testing through other modalities such as routine and diagnostic testing. If the aim is universal knowledge of HIV serostatus then further modelling of what this translates into in terms of VCT sites is required. Such modelling would need to take into account patterns of repeat testing and repeated exposure with time as well as understanding issues of access, equity, and choice in both rural and urban areas. In view of the concomitant expansion of other forms of HIV testing^{157;161} it is likely that there are currently sufficient VCT sites in urban areas and that a further 50 site expansion in rural areas coupled with a strong mobile outreach programme would be able to meet demand. The focus of government should then shift from adding new VCT sites to ensuring their quality and the expansion of quality provider-initiated testing.

The need for more rural sites can be justified by the data in this thesis as the density of VCT sites per head of the population over 15 remains low in rural areas and sites are further apart from each other (see maps in appendix D). Rural poverty and infrastructure mean that clients often walk long distances to sites²¹². Those coming to rural sites are more likely to be women, to have lower educational qualifications, to be unskilled (largely farm) labour and to be aged 15-24 than those attending urban sites (section 5.4.5). Sub-studies conducted by LVCT sites in 2002 and 2003 have

showed 86% lived within the immediate area¹⁶⁷. In other words, the clients who come to the site nearest their rural home are likely to be the poorest and the hardest to reach. They would not be able to access other more distant sites or stand-alones sites (mostly located in urban areas).

8.2 The challenges of achieving optimum uptake

Quantitative efficacy studies^{5;8;14;129;131; 135} to date have reported relatively small numbers of VCT clients visiting stand-alone sites and have had limited follow-up periods with little discussion of the potential for bias due to an over-emphasis of results on early adopters and innovators¹³⁸ (see section 2.3.4 above for an explanation of these groups in public health theory). They have focused on adequacy rather than plausibility or probability²² (see section 2.3.3 above). This section discusses the new findings on VCT utilization (or uptake).

The thesis data on VCT uptake add significantly to previous reported studies (see section 2.6 and referenced above). Previous concerns about poor uptake, lack of sustained response and failure to reach appropriate target groups when scaling up pilot studies¹³⁸ are addressed in the Kenyan context by the evidence presented in this thesis. In contrast to previous studies, the size of the database and the timeframe of the study presented mean that VCT uptake reported is representative of community uptake of VCT over time as well as of national patterns. Significant trends emerging from the quantitative data are presented alongside relevant qualitative insights below. The data are unable to address issues of VCT effectiveness in terms of behaviour change and referral. There is no control arm and no comparison of risk reduction counselling with simple knowledge of status. However, the set up in Kenya described in this thesis

does have good potential for nested studies to include longer follow-up periods and comparison studies in future.

8.2.1 There was a sustained increase in client flow.

Previous pilot studies have been criticised for short follow-up periods and over-reliance of findings on early-adopters¹³⁸. The data presented here reveal an exponential increase in VCT client flow over the time frame of the study; this increase in client flow is still seen when the number of new sites opening and reporting data per month are controlled for. Client flow per site per month (figure 14 in section 5.4 above) is sustained over a five-year period and reflects a shift away from the uptake by innovators and early adopters alone. This is demonstrated in the multivariate analysis by the decline in the proportion of clients coming for information only and an increase in the proportion coming for full VCT services including HIV testing (see table 4).

8.2.2 The uptake by youth was sustained and equal in both sexes.

In line with the stated aims of the taskforce and its guidelines, there was a high uptake of VCT by youth age 15-24. While the proportion of youth increased over the study period, regression analysis did not show a significant impact of the second phase of the media campaign (that specifically targeted youth as individuals). It does appear from secondary data (such as the national surveys of knowledge and attitudes to VCT^{157;213} discussed in section 8.2.6 below) that this phase of the campaign was the strongest from an awareness-raising and branding point of view. “Chanuka” became a household word and the impact of the campaign may have been to increase awareness of VCT rather than going for testing immediately.

The uptake by youth of VCT was encouraging; particularly the high uptake by women and girls aged 15-24, which is in marked contrast to the overall finding that women are less likely to attend VCT than men (sections 5.4.2 and 3). However, it is too early to conclude that this VCT uptake represents sustained behaviour change and studies that follow these same youth as they become older, married and more at risk are needed.

Nationally about 10% of sites are quoted as being specifically ‘youth friendly’¹⁶¹ although the training of counsellors incorporates elements of ‘youth-friendliness’ into the set-up of each registered site¹¹. Only two ‘youth-friendly sites submitted data to LVCT. These indicate that youth are significantly more likely to attend the sites, which are specifically catering to their needs. While others have recognised ¹⁹³ that youth-friendly services are an important strategy in attracting young people to health care, the small number of sites involved mean that the data presented in this thesis are insufficient to comment on the impact of youth-friendly services as a separate strategy. Youth uptake overall was greatest in mobile services in rural areas and in stand-alone sites in urban areas, factors that should influence the taskforce to actively support the establishment of multiple models of youth-friendly service delivery under a single quality umbrella.

8.2.3 The relative proportion of women decreased over the time period of the study.

Fewer women than men attended VCT services overall – with significantly fewer women aged >25 attending than men in the same age group. Over the study period there was a declining trend in the proportion of female clients when compared to men. Previous studies on the introduction of contraception⁶⁹ and of deworming drugs⁷¹

indicate that women and teenagers are more likely to be early adopters in Kenya. This decline in the proportion of all women in these data does not necessarily reflect decreasing uptake of testing by women. It is also possible that women were increasingly accessing testing services elsewhere. During this same time, testing services for the prevention of mother-to-child transmission (PMTCT) also expanded rapidly¹⁶¹. It may be that over time, more Kenyan women, particularly those over 25, learned their status in the context of PMCT services whereas more men decided to learn their status in VCT centres.

Differences in the data were most pronounced in married VCT clients. Married clients in the data were significantly less likely to be male perhaps reflecting their own fear of testing positive. Married women were more likely to attend but three times more likely to test positive than unmarried women. They were the least likely of any group (married or unmarried, men or women) to have used or to take home condoms (a proxy for behaviour change). The reluctance to take home condoms is interesting but further exploration of this was beyond the scope of this thesis. It is a pointer to the gap in services in meeting the needs of married women.

It is unclear what the ideal proportion of male to female attendees is. Nevertheless, the declining proportion of women attending VCT is disappointing given that women are more biologically and socially vulnerable to HIV infection²¹⁴ and that married women are considered an extremely high risk group in established epidemics¹⁴⁰ and that the prevalence rates of HIV infection are more than twice that in their male counterparts accessing VCT services in our cohort. Despite high prevalence rates, married women do not perceive themselves to be a high risk group and experience significant barriers

to HIV testing and disclosure¹¹⁴. Operational research conducted by LVCT in 2003 to explore the low uptake of VCT by women revealed social and equity barriers to testing¹¹⁴ requiring innovative programming responses, such as the introduction of post rape care services in VCT sites²⁰⁰ and the supply of female condoms²⁰⁰.

8.2.4 Uptake by couples did not increase despite targeted efforts.

As in pilot studies^{5,140,215} (section 2.6.4) the scale up described in this thesis made deliberate efforts to recruit couples. Counsellors encouraged clients to bring their partners, sites undertook specific initiatives to attract couples and there was a ‘couples’ mass media campaign during the study time frame. This third phase of the mass media campaign failed to increase the uptake by couples or to demonstrate impact on VCT uptake in general (see figure 15) - perhaps because it had a similar ‘positive lifestyle’ message and target audience to phase 2 and was regarded as an extension to this.

The lack of increase in couples undergoing VCT (see table 4) is likely to be multi-factorial and to include factors such as PMTCT availability, as well as social and equity barriers. The lack of response to national efforts to attract couples remains disappointing, given the previously documented prevention benefit of VCT among discordant couples¹⁴⁰ and its potential to help women overcome barriers to accessing VCT¹¹⁴. Additional efforts are required if couples are to be attracted to VCT outside the incentive driven research settings previously described^{131,140} and operational research into the prevention benefits of VCT in couples is needed in a more ‘real life’ setting.

8.2.5 The proportion of clients with symptoms accessing VCT did not change, neither did HIV prevalence.

Despite the fourth phase of the mass media campaign targeting the unwell and the success of the phases that specifically mention HIV, HIV prevalence rates remained stable over the timeframe of the study, indicating that VCT continues to attract the asymptomatic individual who wants to know their status before future life events or after perceived risk behaviour. This implies that there is a major unmet need for HIV testing in other (diagnostic and routine) settings.

8.2.6 The mass media campaign had unexpected benefits and impact

The findings highlight the central importance of the mass media campaign to the national scale up process (see section 5.4.7 and 6.2.4). Key messages that emerged were: to refer directly to the possibility of testing HIV positive in campaigns, to link campaigns to sites through the use of a simple logo and to create a professional campaign that is attractive to policymakers as well as potential clients.

The results of the Poisson regression model presented in this thesis show that the first and final phases of the campaign, which made overt links with HIV and with testing positive, had significant impact on VCT uptake in contrast to the more subtle “life styles” messages of the second and third phases, as described above (table 5, figures 13 and 14 in section 5.4.7 above).

The creation of a VCT logo used on all advertising and signboards is likely to have contributed to the overall success of the promotional campaign. It helped the public identify VCT sites and also linked one phase to the next. In addition to the uptake data

presented here, there is indirect evidence that the mass media campaigns raised awareness of HIV. Five national surveys of knowledge and attitudes toward VCT were conducted among Kenyan adults during the campaign^{157;213;216}. Two of these remain unpublished. All were large, randomly conducted surveys (four were probability-based and nationally-representative) with sufficient overlap with the promotional campaign to be helpful in understanding the impact of its four phases. The surveys conducted show high recognition rates of VCT. By the time of the 2003 Kenya DHS, 52% of respondents said that they had heard of VCT¹⁵⁷. Exposure to VCT advertising increased from 45% in the urban youth surveyed in 2002²¹³ to 85% in the urban youth surveyed in 2005 (unpublished data, PSI, 2005). Among those surveyed in 2005 over half of the respondents reported discussing the campaign with friends or family, and 97% said they would like to continue seeing the advertisements.

Qualitative findings also revealed benefits of the mass media campaign beyond increasing VCT utilization. In-depth interviews and taskforce minutes reveal that the professional nature of the advertising campaign contributed to a sense among the public and health workers that VCT is a legitimate, well supported new service. As the campaign phases progressed, VCT became a fashionable service that many politicians, primary health centres, NGOs, churches and work places felt they should provide. Stigma around HIV testing appears to have declined considerably since 2001, and going for a test has become normalized, evidenced not only by uptake data presented here (chapter 5) but also by the crowds who gather openly where mobile VCT services are offered (figure 24).

Figure 24: photo of mobile VCT services early 2005 (photo by Dr Elizabeth Marum)



The VCT taskforce in Kenya heeded lessons from previous mass media campaigns^{78;217} (see section 2.3.6) and from public health theory^{66;67;68} (section 2.3.4) in the coordination of the campaigns, ensuring that sites were opened in a staggered fashion, that the campaign was conducted in phases and that sites were able to meet demand. The specific targeting of personality types associated with being early adopters, early and late majority may require further operational research on behaviour around VCT testing. However, the data in this thesis indicate that a critical mass of acceptance has been reached in Kenya.

8.2.7 Increasing the site capacity to increase uptake

It is likely that the majority of existing sites would be able to see more clients without additional resources. Our data indicate that the existing systems have not yet reached saturation point (where client flow per site plateaus off as the site become unable to meet the demand). This may be seen by the continuing response to mass media campaigns as late as the fourth phase in 2005 (figure 15, section 5.4). Additional

flexibility to respond to demand may yet be achieved through mobile services. The increase in rural clients suggests that further expansion of VCT in rural areas of Kenya, perhaps through mobile services, will help continue the trend of increasing numbers of persons learning their HIV status (table 4).

Calculating when a site has reached capacity requires an understanding of a number of interlinked factors including institutional requirements, staffing levels and capacity, location, season and the complexities of the client/counsellor interaction. In other words some clients may require more of a counsellor's time. Some counsellors may perform perfunctory information-giving only. Some counsellors are full-time employees, some part time, some volunteers who come once a week. To illustrate the impact of the institutional requirement for a particular style of counselling, the average daily number of clients per counsellor (including days off for supervision, time off in lieu etc) was lower when calculated for LVCT counsellors (3.15 clients per counsellor per day) than for the sites served by CDC staff (average of 4.52 clients per counsellor per day). While LVCT worked primarily with government staff and encouraged counsellors never to see more than 8 clients in a day, CDC worked with CBOs and stand alone sites that were remunerated on a per client basis. Counsellors in these sites saw up to 15 clients in a day. The low averages (3.15 and 4.52) are explained by the inclusion of data from weekly volunteers, part time employees and health facility staff with other duties.

8.2.8 Impact of poor logistics on VCT uptake

Kenya had sub-contracted procurement of HIV testing supplies and logistics to John Snow Inc. (JSI) taking on only the role of national coordination⁵⁷. As a national body

the VCT taskforce registered sites; worked to prevent theft (or ‘leakage’) from government facilities and liaised with service providers. When it became clear that the periods of stock outs in 2003 were having a negative impact on uptake of VCT services (confirmed by the Poisson regression model- section 5.4.7) sites supported by donors through NGOs and by the Centres for Diseases Control bought and stockpiled rapid test kits to prevent site closure and mitigate against the impact on uptake. This may in turn have artificially widening the gap between client numbers seen in stand-alone sites and those in health facilities (section 5.4.5).

8.3 The challenges of quality assurance

Studies conducted with VCT clients in Kenya¹⁹⁹ revealed that the quality of the client-provider interaction was the single most important factor influencing VCT uptake. Literature has also revealed that uptake and behaviour change are distinct outcomes at least for the HIV negative client^{5,135} and that the quality of the interaction may impact the behaviour outcome²¹⁸. Finally from literature on scale up it clear that during the rapid scale up of any service the quality may drop, compromising programme effectiveness (section 2.3.7). The comprehensive quality assurance system described in section 7.3 allowed the VCT taskforce to be confident that they were delivering the same standard of service in multiple settings. The VCT quality assurance systems built up in Kenya are relevant to other HIV services in Kenya and elsewhere as they are based on simple, replicable models suitable for resource-poor settings. The ongoing rapid scale up of ART, its complexity and potential for harm, form a disturbing parallel to the VCT situation and lessons learnt are particularly pertinent. These are discussed further in section 8.5 below.

8.3.1 LVCT's role in the quality of national scale up

The case study of LVCT, described in chapter 7 above, helps illuminate the trends in the quantitative and qualitative data and shows the interaction between national processes and key organizational structures, providing a stronger more robust methodological approach¹⁸² and adding credibility to the results. As an NGO established by me, who was a taskforce member, its strategies are embedded in the on-going debates of the national taskforce.

Although the literature describes NGO experiences of scale up²¹⁹ as distinct approaches for example additive or multiplier, catalysing or policy development (see section 2.2.2) in practice LVCT used all of these approaches simultaneously. Some, such as the establishment of the National Quality Assurance Team, were conscious attempts to influence policy; others were subconscious through role modelling services. LVCT contributed to scale up using a bottom-up approach²⁸. It used a systematic approach to scale up (section 7.2) and contributed directly through adding new sites. These sites then set an example of quality assured services in government primary health care systems. This leading by example¹⁶ meant that many of LVCT's ideas, methodologies and models of service provision are adopted by other organizations, including government, in a similar manner to strategies employed by the African Medical and Research Foundation (AMREF) in Kenya³⁶ with the use of insecticide treated bed net among other public health interventions²²⁰.

LVCT also acted indirectly through technical assistance such as the training of trainers and the design and implementation of QA systems. This approach was able to

catalyse other organizations¹⁶ and its operational research was able to influence policy in a number of areas (see section 7.4).

The QA model developed by LVCT included client exit interviews, data evaluation and counsellor training and reflection⁸⁶. The comprehensive nature of the QA system meant that equity issues automatically became part and parcel of quality issues at LVCT supported sites. The case study has shown how LVCT was able to respond proactively to equity issues emerging from the national data set and through this, inform the need for equity debates at national level. The opportunities LVCT had to bring services to groups that were marginalised through their illegality illustrates that LVCT could do what the Ministry of Health arguably couldn't do for MSM because of their position within the law (section 7.5).

8.3.2 Evaluation as a quality measure

The feedback of data analysis and the use of evaluation (section 2.3.3) as a quality assurance measure, as undertaken by LVCT, not only strengthened programmatic responses it also provided a key to achieving optimum uptake of services (section 8.2 above) through innovative new programme design. Better attention to data management systems (2.3.4) and logistics (section 2.3.2) as well as prospective planning for evaluation would have improved the quality of the national VCT scale up in Kenya.

8.3.3 Standardisation of quality allows for comparison

The quality of the client counsellor interaction is likely to be the single most important factor in influencing individual client's potential for behaviour change²¹⁸.

In other words a client-centred counsellor who allows and supports clients to explore their own solutions is more likely to successfully impact behaviour change than one who tells clients what to do. This level of detail is difficult to control for when comparing the behaviour change impact of VCT efficacy studies^{5;14;128;135;137} (section 2.6.3). The studies require careful comparison of the different VCT strategies as well as differing levels of counselling quality before comparison of outcomes can be made. Since details on the differing approaches are not given in the studies to date, conclusions about the behaviour change impact are difficult to draw. Even in Kenya, where the QA system attempts to control for counselling quality (section 2.3.7), differences in approach, skill level and empathy are found in analysis of client exit interviews, in mystery client exercises and in qualitative research with service users²²¹. The standardisation of counselling quality within VCT makes this a potential partner for further studies on behaviour change following HIV testing. Research is also needed into whether knowledge of status alone can lead to behaviour change and what the best accompanying counselling package is, if any. There are no published studies to date that compare the behaviour change impacts of learning HIV serostatus through diagnostic or routine testing with VCT.

8.4 The challenges of the thesis methodology

Despite the rapid progress made in VCT scale up, unanswered questions remain about the longer term impact of VCT on the communities in which it is provided which cannot be answered by this thesis methodology. Prediction of future uptake and demand is limited by the lack of understanding of why people don't use services, with current research in Kenya being limited to small formative studies^{187;199;200;202}. It is unclear what the contribution of VCT is to behaviour change in the community or to

the overall HIV incidence; multi-factorial questions that are unlikely to be answered by VCT studies, however well designed. Recent analyses of antenatal sero-surveillance, PMTCT and DHS data in Uganda, Kenya and elsewhere^{157,222-224} indicate that trends in HIV prevalence rates of VCT clients closely follow those in national surveillance (albeit at higher prevalence rates) and are declining.

The qualitative methodologies are described in detail to enable the reader to ascertain the trustworthiness of the data presented and understand how my unique position and perspective affects the validity and interpretation of the data. Strengths of this ‘insider’ approach are the privileged insights that come from being part of a process and the long-term view afforded. While an outsider might only get a snapshot of issues at the forefront of people’s minds during interviews, an insider would have institutional memory and knowledge of previous issues. For example the development of the training manual for VCT counsellors in Kenya was a contentious and hotly debated issue both in the VCT taskforce and between KAPC, CDC and LVCT. However, this issue was barely mentioned in the taskforce interviews as the manual had been agreed and written some two years previously and the issue resolved in people’s minds. Instead more recent events around the laboratory testing and the cadre of counsellors were prominent.

In addition to me, the taskforce members interviewed as primary data sources were also in a sense ‘insiders’¹⁸⁵. Early drafts of the thesis were sent for comment to interviewees, which led to both comment and correction. Some of what they said gave perspective on their own biases. I was better able to evaluate this insider data for being very familiar with the context and by knowing the sources of the data well. This

enabled consideration of how information was selected to be given in the interviews and why people agreed to be interviewed.

As participant observer I had an impact on the process of scale up and the strategies employed. The influence of that role on the process and strategies emerges in the interviews with references to the development of the training manual, the quality assurance team, the cadre of counsellors and in the reflections on what might have been done differently. Specific recognition of the influence of LVCT on scale up is made to me as the interviewer directly with reference to 'personalities and drivers of scale up'. Tensions between the differing roles as NGO director, taskforce member and interviewer may have influenced interviewees to say things they thought the interviewer wanted to hear (see section 4.3.1.1). Strongly articulated opinions on the speed and quality of scale up that I had previously expressed may have come to the forefront of people's minds in the interviews and assumed a relatively greater importance in how they viewed scale up.

The VCT taskforce operated by consensus rather than by a democratic voting system. Since no decisions were made until every member present was happy to move forward, long iterative discussion took place, often making it hard to tease out the exact influence of any individual (including myself) or organization (such as LVCT) on strategy or process. Furthermore, suggestions made by an individual or a donor representative could be taken up by government and become government strategies and vice versa.

The use of LVCT as a case study is not intended to draw general conclusions about the more complex national scale up. Rather it illustrates both the disproportionate influence of individual organizations and individuals can have on scale up and also the parallel scale up of an organization that informed and was informed by national scale up in tandem.

8.5 Lessons learned of relevance to HIV services

Ambitious targets have been set internationally for the prevention of HIV and to increase dramatically the number of HIV positive persons receiving AIDS care and ARV treatment. International efforts to increase access to HIV treatment depend on the capacity of local testing programmes to identify persons eligible for treatment. Meeting international goals will require an exponential increase in the number of persons who know their HIV status and a rapid scale up of treatment centres both of which could learn lessons from VCT scale up in Kenya. Despite the impressive scale up of VCT services, further expansion of testing is needed to achieve global treatment targets, such as the WHO “3 by 5” initiative. Further, VCT sites are not the best sites to identify large numbers of persons with HIV infection; provider-initiated testing of sick patients in hospitals and medical wards is more appropriate for this purpose.

8.5.1 VCT Lessons Learned

Two policy elements of Kenya’s successful approach could be replicated elsewhere to increase access to testing through VCT: the use of counsellors who are not clinical health workers, and allowing these counsellors to conduct in-room testing (see section 6.2.3). The laboratory needs associated with ART care, such as CD4 and viral load testing, require trained laboratory technicians and technologists; the simple, whole

blood testing done for HIV screening in VCT sites should be left to appropriately trained and supervised counsellors.

The evidence from Kenya suggests that a professionally designed mass media campaign with a consistent logo could be a highly beneficial component in other countries, and will result in increased numbers of persons being tested for HIV. Overt mention of HIV testing, including the potential of testing HIV positive, had more impact in Kenya than the use of celebrities or a “lifestyles” approach.

Flexibility in programme design allowed responsive, locally designed models to flourish. Data collected in VCT sites has informed promotional campaigns, and highlighted the need to extend services to youth, couples, and rural areas. Rather than requiring that VCT occur in restricted settings, Kenya’s emphasis on universal standards has encouraged flexibility and innovation, and has enhanced equity of access through service delivery to previously neglected communities and vulnerable groups, such as the deaf, refugees, prisoners, and nomads. VCT in Kenya has become a service that attracts more men than women and flexible programming responses, such as the introduction of post rape care services in VCT sites and the supply of female condoms are required given the higher rates of HIV prevalence in women.

The approach in Kenya focused on the preventive benefits of VCT with management of HIV/AIDS being targeted according to serostatus. In retrospect, it would have improved overall testing services if the original Kenya VCT guidelines, QA systems, and national data collection tools had covered all forms of HIV testing.

8.5.2 Impact of ART programmes on VCT scale up and prevention benefits

As discussed in section 2.6.5 of the literature review, the impact of the availability of antiretroviral therapy (ART) on VCT (as opposed to the uptake of provider-initiated HIV testing in other more medical settings) is unclear. From early 2004, there was a significant increase in the availability of low cost and public sector ART in Kenya. The increased uptake of VCT noted following the fourth phase of the mass media campaign may have been influenced by other concomitant HIV campaigns, including an ART campaign which ran on limited media channels for six weeks beginning in February 2005. While common sense suggests that the availability of treatment will affect the uptake of VCT, qualitative studies had indicated that the effect would not be as great as predicted²²⁵. In the five national surveys referenced above (section 8.2.6), a stated willingness to test among those who had never been tested remained stable at around three quarters of respondents in all 5 surveys between 2000 and 2005. In the 2005 survey only 6.5% (104/1589) of never tested respondents felt that the availability of antiretroviral therapy (ART) would entice them to go for a test (unpublished data, PSI 2005).

The positive impact of the first phase of the Kenyan VCT mass media campaign described here pre-dated the availability of ART and was almost as great as that of the fourth phase when ART roll-out was well underway. Taken alongside the lack of impact of the second and third phases of the campaign, conducted during the early stages of ART availability, there is insufficient evidence from the data presented in this thesis that ART programmes in Kenya significantly impacted on the uptake of client-initiated testing. The increasing availability of provider-initiated HIV testing in clinical facilities in 2004 and 2005 may be a factor, as increasing numbers of patients

were tested and therefore these symptomatic individuals did not need to utilize the client-initiated or self-referred model of testing in VCT sites.

Kenya recommends ART for those who are symptomatic with HIV (stage three or four disease) or have CD4 counts below 200¹²¹. Access to drugs for those who are ill does not seem to have raised the value of VCT for those who are asymptomatic. The multivariate analysis revealed no increasing trend in clients coming for testing due to symptoms after the increased availability of ART from 2004 or in the proportion of clients testing HIV positive.

While VCT has been shown to have a prevention benefit in the HIV positive individuals⁵, those in discordant couples¹⁴⁰ and in some circumstances⁵ those who test HIV negative, to date there is also insufficient evidence internationally for any prevention benefit from increased access to ART alone. These services target the unwell, who are at lower risk of transmission. The public health impact of increased numbers of HIV positive individuals being on treatment (and therefore having lower viral loads and lower transmissibility) is as yet unclear. The improvement in life expectancy and performance status could also increase opportunities for unprotected sexual transmission of HIV virus with the potential for transmission of acquired resistance. The provision of ART should therefore not be at the cost of reducing VCT provision and other prevention counselling opportunities. An on-going marriage between VCT, with its proven prevention benefits in HIV positive individuals, and the ART roll out is required.

8.5.3 Applicability of Lessons Learned to ART Scale up

While the data are not able to substantiate the intuitive conclusion that ART uptake will affect the uptake of VCT services or vice versa, important lessons on scale up of services are nevertheless directly relevant to the massive international ART scale up currently underway. The findings presented here on VCT scale up in Kenya are applicable not only to VCT scale up elsewhere, but also for diagnostic testing and ART scale up in Kenya and in other countries with high HIV burden. Conducive government coordinated policies informed by pilot projects provided an essential backdrop to the scale up of VCT. Clear national ART policies are needed, and should be developed by national task forces, informed by experience in existing ART programmes. Articulation of guiding principles such as equity of access for the poor, women, and other marginalized groups is important to guide policies and practice.

Flexibility regarding personnel, protocols, and models of service delivery, responsiveness to clients' preferences, continual data review, mass media campaigns, government support, and generous donor funding have all contributed to the rapid scale- up of VCT services in Kenya, and are all applicable to ART scale up.

Involving a wide range of partners, including not only large international and national organizations but also local community and faith-based groups has the potential to expand services rapidly. The current inadequate numbers of health workers trained in ART delivery can be partially addressed by creative use of auxiliary workers for all non-clinical duties such as counselling, simple bedside testing, adherence counselling, and family outreach. To ensure equity of access to rural and special populations, innovative approaches such as mobile clinics may be needed, possibly in combination with mobile VCT services. Mass media campaigns promoting ART services are

likely to increase both provision and utilization of ART care. Quality assurance systems, including registration of approved ART sites and supervision methods, are urgently needed.

Careful attention to the procurement and distribution of antiretroviral drugs is essential to prevent the stock-outs that have occurred of test kits in Kenya. In many countries, procurement and distribution systems for test kits are the same as for medications. Concerns about the public health impact of intermittent supplies of ARVs are justified, given experience with stock-outs of HIV test kits and financial stability and long-term procurement plans should be built into programmes. Finally, and perhaps most importantly, responsiveness to patients' needs and preferences (such as wishing to remain in the room while the rapid test is conducted see section 6.2.3) is essential and may lead to innovations in care as have occurred with VCT services in Kenya. Local modifications in models of ART delivery that are quality assured and responsive to patients' preferences as well as having a commitment to equity and to engaging patients as active participants in their own care, are likely to contribute to the successful scale up of AIDS treatment in the developing world.

8.6 Summary

In this thesis quantitative and qualitative findings complemented each other to reveal new knowledge about VCT coverage, utilization and quality.

Substantial progress is described in the provision, utilization and coverage of VCT services. Existing concerns about scaling up existing studies may not be justified in light of the evidence on uptake presented in this thesis. Service provision is replicable,

demand and uptake are high and there is room for further expansion without opening new sites in urban areas as the system is not yet saturated. Previously unvoiced concerns about equity of service provision and its quality are raised by the findings and addressed in part by what follows.

The importance of responding to the needs of different groups is captured in the data, which highlights the barriers to uptake of women, youth and people in rural areas. The case study of LVCT also describes programmatic responses to the needs of these groups alongside other often-neglected groups such as MSM and the Deaf. However, these responses are limited to the capacity of one organization and there remains need for equitable access among other disabled or disadvantaged groups nationally.

Chapter 9

Conclusion and Recommendations

This thesis aimed to evaluate and describe the scale up of HIV testing services in Kenya using operational research methods and feedback a robust, replicable model applicable to other HIV services and settings.

9.1 Documenting VCT scale up in Kenya

VCT scale up in Kenya progressed rapidly between April 2001 to June 2005 and detailed client data are available from almost 125,000 clients. The quantitative analysis of client flow and characteristics, the analysis of access patterns and of VCT site provision and coverage document for the first time that there was a sustained demand for VCT services amongst asymptomatic sexually active individuals in all regions of Kenya and in all walks of life. The high uptake by young people in all settings and by young women in equal proportion to young men was encouraging as they represent the future of the epidemic. There remain unanswered questions about service non-users, about the effect of VCT on behaviour and on HIV incidence in Kenya.

9.2 Understanding VCT scale up from a stakeholder perspective

The VCT scale up process in Kenya was catalysed by a few key personalities and organizations being in the right place at the right time. The development of quality assured services and systems relied on the interaction between government, donors and NGOs. While symbiotic relationships were beneficial, so was the element of competition that emerged. This thesis provides a unique record of some of those interactions. The example of LVCT described as a case study highlights the strengths of these interactions and their potential to influence scale up. Currently, in 2007 and under new leadership, LVCT continues to give technical assistance to the

government, other NGOs and neighbouring countries in the opening and maintaining of quality assured VCT sites.

9.3 Key recommendations for future scale up of VCT services

The thesis describes the proactive use of operational research in Kenya by LVCT which used results to re-examine VCT structure and delivery. The qualitative and quantitative methods used in this thesis were complementary and both methods were useful in thinking through priorities and developing flexible responses and recommendations for future scale up of VCT services either in Kenya or in other contexts.

Successful practices in Kenya recommended for other countries:

- Ensure government leadership on policy and coordination in VCT
- Integrate VCT in primary health care systems
- Institute national registration of VCT sites and update/inspect regularly
- Develop comprehensive quality assurance for VCT to include testing, counselling and site management
- Ensure that VCT training reflects VCT counsellor's job descriptions
- Allow lay counsellors to test.
- Allow for in-room testing with clients present
- Ensure that VCT scale up was engendered
- Ensure VCT reaches vulnerable and marginalised groups

Mistakes made in Kenya that others could avoid:

- Plan national VCT roll-out proactively with a realistic strategy
- Roll out comprehensive quality assurance alongside VCT site opening
- Mention HIV and the possibility of testing positive in mass media campaigns
- Collect data that are used and provide feedback to sites
- Focus national roles on policies, guidelines and registration or accreditation processes. Project funds for national level should not be used for scattered workshops or for national level staff to conduct site level trainings.

There remain further gaps and opportunities to use the results and recommendations of this thesis within Kenya itself. The following are particularly pertinent:

- a change of policy on the issue of the cadre of counsellors
- the development of HIV testing guidelines to incorporate all forms and situations for HIV testing

Currently services for care and support for HIV positive VCT clients are far behind those for HIV testing. They are not available at all sites and referrals are not sufficiently systematized. These linkages to services and the scale up of other HIV services need to be deliberately planned.

9.4 Key lessons applicable to HIV services in resource-poor settings

A number of elements emerged that would be useful for resource-poor countries setting out on scaling up HIV services, whether VCT, post rape care or other services.

These may be summarised as:

- Foster high ownership by the government
- Integration of HIV services into government services is appropriate
- Use a basket of approaches for service delivery only if a functioning QA system is in place
- Professional behaviour change communication should supplement individually-tailored approaches
- Demonstrating best practices in pilot sites is effective and can be scaled up provided that attention is paid to details (such as time taken for filling data forms etc).
- It is wise to start slowly, emphasizing high quality and cost-effectiveness
- National data forms should be easy to fill out accurately and only collect information that will be used.
- Participatory processes lead to a trade off between quality and buy-in and should be guided by strong leadership.
- Nationally organized projects must ensure that a strategic approach is taken and policy formulated.
- Working at the district level is the answer: at the district level, motivated individuals exist and can ensure that a project can work.

This thesis presents a unique record of VCT scale up in Kenya and adds to the existing literature in part through its detailed description of the Kenyan VCT scale up and in part through highlighting new lessons for similar services in other contexts. In the words of one of the taskforce members and interviewees giving feedback on the write up:

“I had no idea that the whole process would translate into such a serious permanent record of the VCT scale up activities in Kenya. Congratulations” (Interviewee No. 7)

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Appendix A: Index of publications and presentations relevant to thesis

RELEVANT PUBLICATIONS IN CHRONOLOGICAL ORDER

Taegtmeyer M, Chebet K. Overcoming challenges to the implementation of antiretroviral therapy in Kenya. *Lancet Infect Dis*. 2002; 2:51-3.

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Hamilton C, Kilonzo N, Mung'ala L, Theobald S, Tolhurst R, Taegtmeyer M. Potential for Abuse in the VCT Counselling room; A qualitative research study. Submitted to Health Policy and Planning in August 2007.

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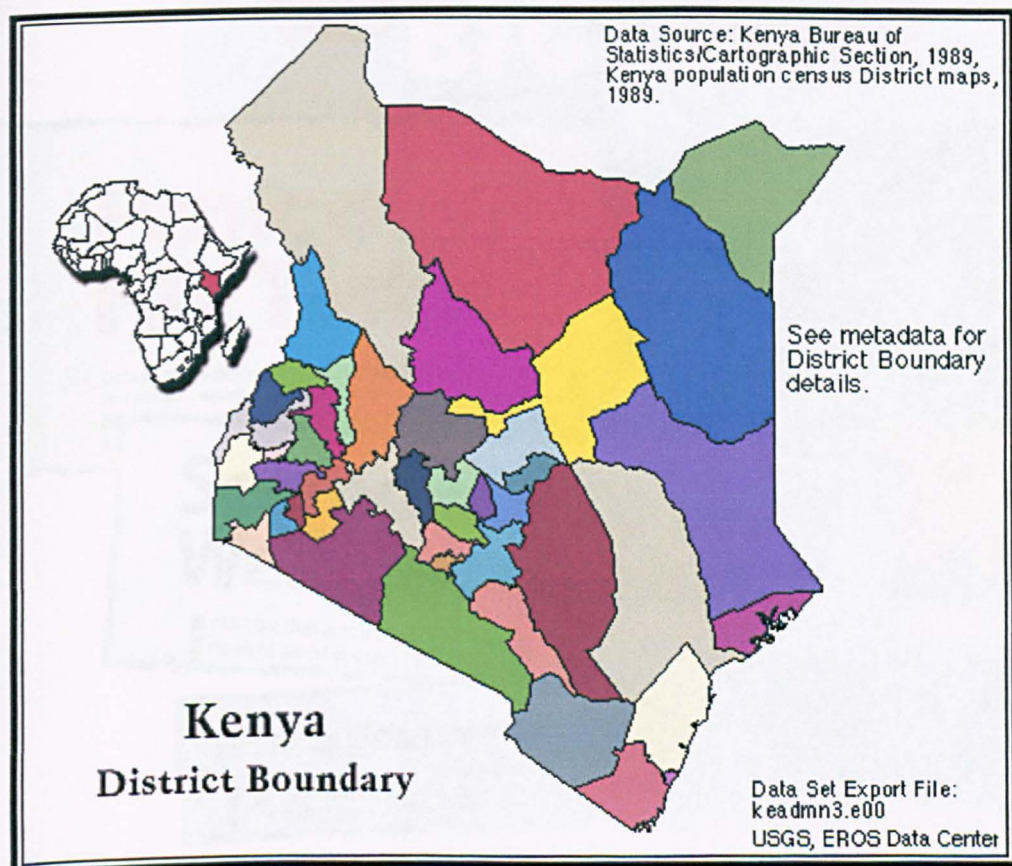
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Appendix B: Map of Kenya

September 2003



Appendix C: Sample VCT newspaper headlines August and September 2003

THE BIG ISSUE

Panic over HIV Testing

Debate over whether or not to test for HIV at VCTs has been raging. Test results - which are either positive or negative - are being issued before a second opinion. As a result, those who test positive are

Should you go for HIV testing if treatment is not available?

Scared of HIV test? Well, yes and no!

JACKSON Odu'ambo gazes at his brother's grave with tears trickling down his face. The death of his brother, Kospin Otieno, who had died six weeks

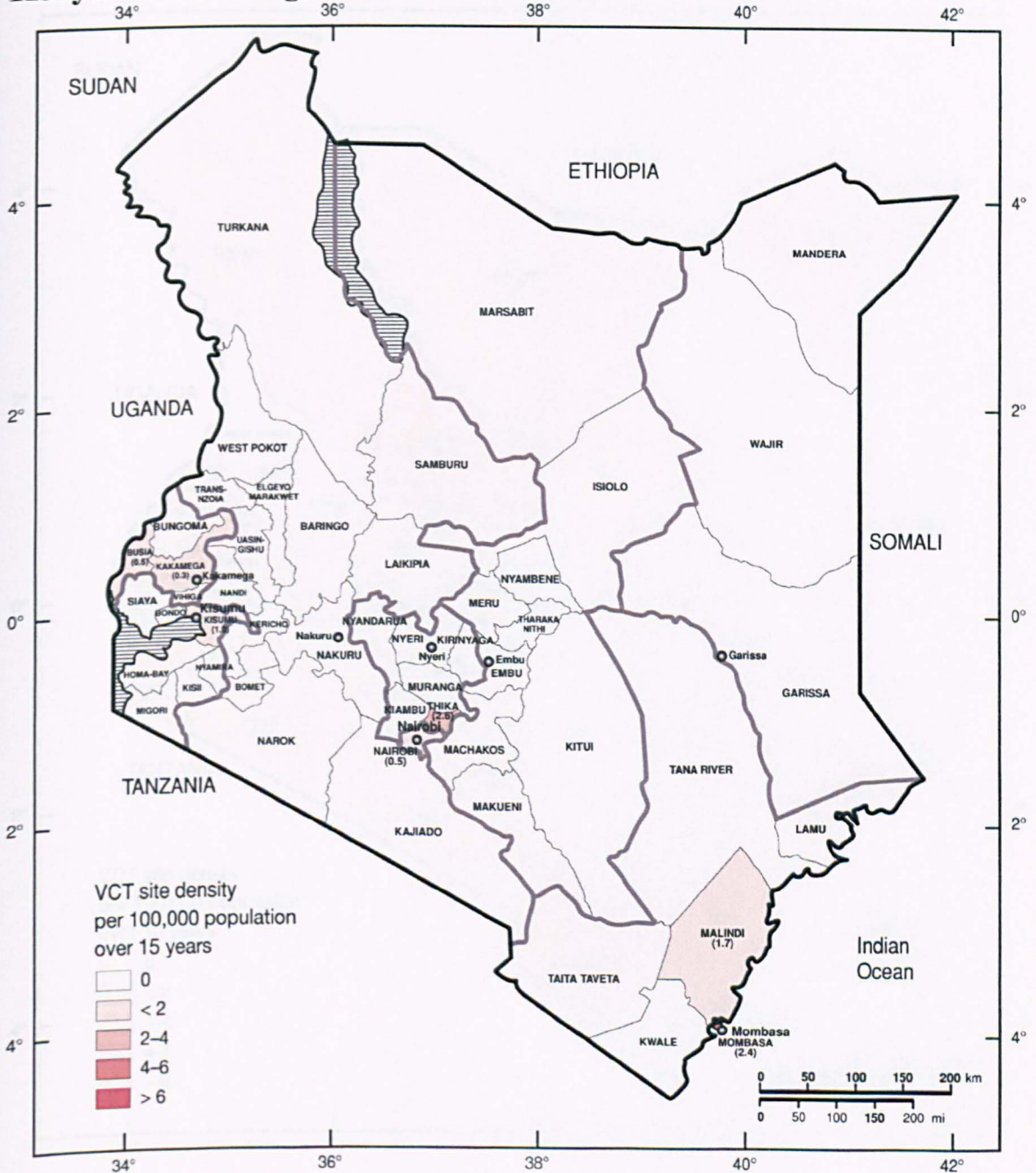
... always
...ual's in-
...ion.
...its co-spon-
...testing - HIV

Testing poses new challenges to jurisprudence

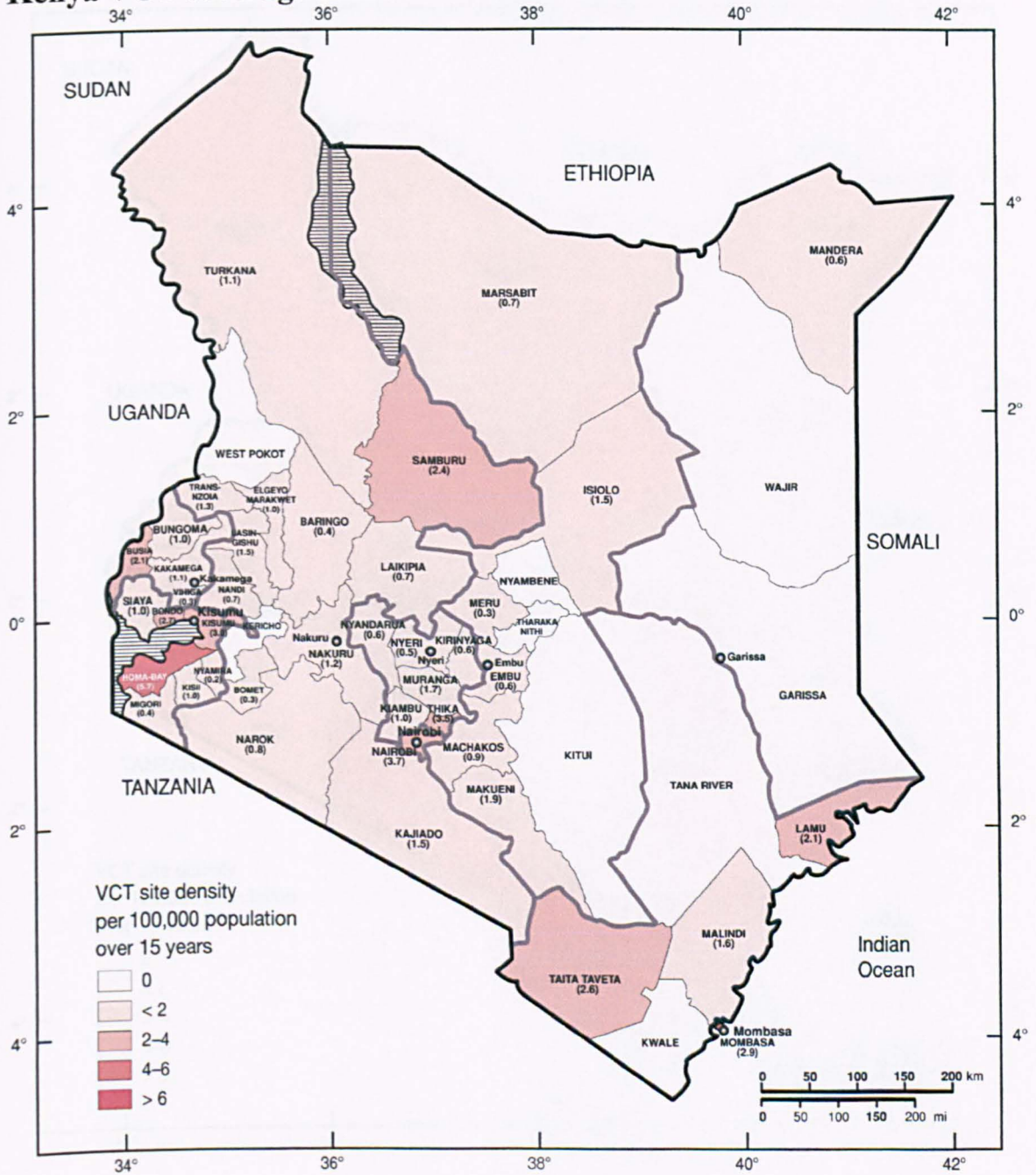
THE determination of a person's HIV status lies at the centre of the nation's efforts to confront the deadly virus but the courts are yet to pay dividends if the mounting death toll from AIDS-related conditions is to be reduced. A precondition to something, say securing employment or obtaining a travelling visa, important legal questions also

Appendix D: Detailed Maps of District VCT Coverage in Kenya per 100,000 of population aged >15

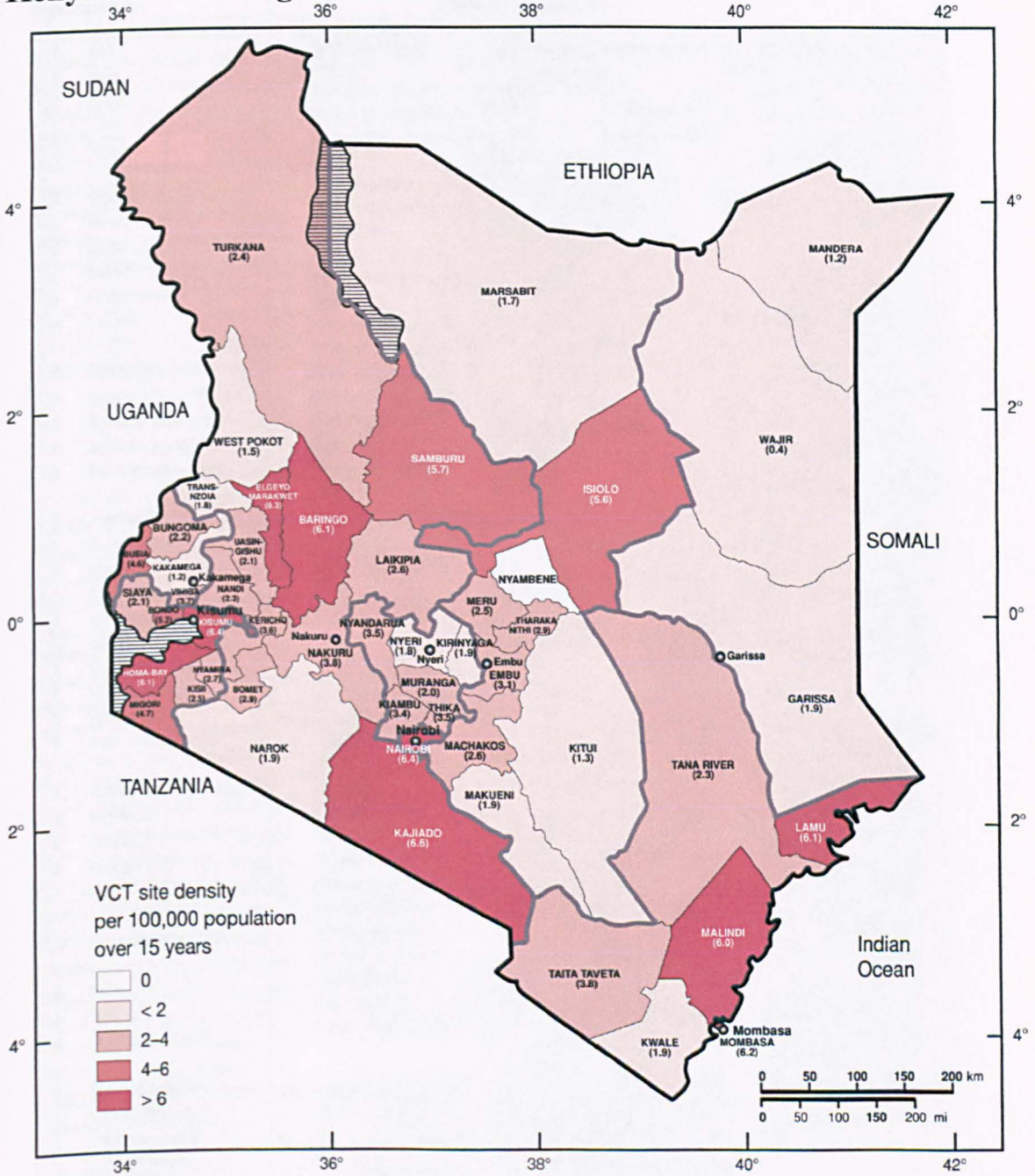
Kenya VCT coverage 2001



Kenya VCT coverage 2003



Kenya VCT coverage 2005



Appendix E: Variables on national VCT data form

National Voluntary Counselling & HIV Testing Form

Date <input type="text"/>		Province <input type="text"/>	District <input type="text"/>	Site <input type="text"/>	Site Type <input type="text"/>	Counsellor <input type="text"/>
Return Visit? No <input type="checkbox"/> Yes <input type="checkbox"/>		New Code? No <input type="checkbox"/> Yes <input type="checkbox"/>		Client Code <input type="text"/>		
Partner Code <input type="text"/>		Mother's Maiden Name <input type="text"/>				

<p>1. Sex</p> <p>1 <input type="checkbox"/> Male</p> <p>2 <input type="checkbox"/> Female</p> <p>2. Age <input type="text"/></p> <p>3. Occupation (tick one)</p> <p>0 <input type="checkbox"/> None</p> <p>1 <input type="checkbox"/> Unskilled</p> <p>2 <input type="checkbox"/> Skilled</p> <p>3 <input type="checkbox"/> Professional</p> <p>4 <input type="checkbox"/> Student</p> <p>4. Education (tick one)</p> <p>0 <input type="checkbox"/> None</p> <p>1 <input type="checkbox"/> Some primary</p> <p>2 <input type="checkbox"/> Some secondary</p> <p>3 <input type="checkbox"/> Some Post secondary</p> <p>5. Marital Status (tick one)</p> <p>0 <input type="checkbox"/> Never married</p> <p>1 <input type="checkbox"/> Steady partner, not living together</p> <p>2 <input type="checkbox"/> Steady partner, living together</p> <p>3 <input type="checkbox"/> Married, monogamous</p> <p>4 <input type="checkbox"/> Married, polygamous</p> <p>5 <input type="checkbox"/> Widowed</p> <p>6 <input type="checkbox"/> Separated/divorced</p> <p>6. Client seen as (tick one)</p> <p>1 <input type="checkbox"/> Individual</p> <p>2 <input type="checkbox"/> Couple</p> <p>3 <input type="checkbox"/> Group</p> <p>4 <input type="checkbox"/> Polygamous group</p> <p>7. Client Pregnant (Women) (tick one)</p> <p>0 <input type="checkbox"/> No</p> <p>1 <input type="checkbox"/> Yes</p> <p>2 <input type="checkbox"/> Don't know</p> <p>8. Service required (tick one)</p> <p>1 <input type="checkbox"/> Information only</p> <p>2 <input type="checkbox"/> Counselling only</p> <p>3 <input type="checkbox"/> Full VCT service</p>	<p>9. Why here today (tick all that apply)</p> <p><input type="checkbox"/> Plan to get married</p> <p><input type="checkbox"/> Plan to get pregnant</p> <p><input type="checkbox"/> Plan for the future/know status</p> <p><input type="checkbox"/> Client risk behaviour</p> <p><input type="checkbox"/> Partner risk behaviour</p> <p><input type="checkbox"/> Feel unwell</p> <p><input type="checkbox"/> Had blood transfusion</p> <p><input type="checkbox"/> Partner Pregnant (Men)</p> <p><input type="checkbox"/> Reunion</p> <p><input type="checkbox"/> Referred by other client</p> <p><input type="checkbox"/> Referred by health worker</p> <p><input type="checkbox"/> Child HIV positive/died</p> <p><input type="checkbox"/> Partner HIV positive/died</p> <p><input type="checkbox"/> New sexual partner</p> <p><input type="checkbox"/> Tested elsewhere</p> <p><input type="checkbox"/> After window period</p> <p><input type="checkbox"/> Had circumcision</p> <p><input type="checkbox"/> Exchanged sex for money or favours</p> <p><input type="checkbox"/> Intravenous drug use</p> <p><input type="checkbox"/> Raped</p> <p><input type="checkbox"/> Other—please specify <input type="text"/></p> <p>10. How did client learn about this service (tick all that apply)</p> <p><input type="checkbox"/> Television</p> <p><input type="checkbox"/> Radio</p> <p><input type="checkbox"/> Newspaper</p> <p><input type="checkbox"/> Poster/Sign post</p> <p><input type="checkbox"/> Pamphlets</p> <p><input type="checkbox"/> Relative/friend</p> <p><input type="checkbox"/> Sex partner/spouse</p> <p><input type="checkbox"/> Another VCT client</p> <p><input type="checkbox"/> Religious meeting</p> <p><input type="checkbox"/> Community meeting</p> <p><input type="checkbox"/> Health worker</p> <p><input type="checkbox"/> Peer educators</p> <p><input type="checkbox"/> Other - Please specify <input type="text"/></p> <p>11. Has client ever had sex?</p> <p>0 <input type="checkbox"/> No</p> <p>1 <input type="checkbox"/> Yes</p>	<p>12. Sexual partners in last 12 months</p> <p><input type="text"/> Heterosexual</p> <p><input type="text"/> Homosexual</p> <p>13. Condom use in the last 12 months</p> <p>Steady partner: (tick one per partner)</p> <p>0 <input type="checkbox"/> Never</p> <p>1 <input type="checkbox"/> Sometimes</p> <p>2 <input type="checkbox"/> Always</p> <p>3 <input type="checkbox"/> No sex last 12m</p> <p>4 <input type="checkbox"/> No steady partner</p> <p>9 <input type="checkbox"/> Never had sex</p> <p>Non—steady partner: (tick one)</p> <p>0 <input type="checkbox"/> Never</p> <p>1 <input type="checkbox"/> Sometimes</p> <p>2 <input type="checkbox"/> Always</p> <p>3 <input type="checkbox"/> No sex last 12m</p> <p>4 <input type="checkbox"/> No non-steady partner</p> <p>9 <input type="checkbox"/> Never had sex</p> <p>14. Condom use last sex (tick one)</p> <p>0 <input type="checkbox"/> No</p> <p>1 <input type="checkbox"/> Yes</p> <p>2 <input type="checkbox"/> Yes, but condom broke</p> <p>3 <input type="checkbox"/> No sex last 12m</p> <p>9 <input type="checkbox"/> Never had sex</p> <p>15. If not tested, why not (tick one)</p> <p>1 <input type="checkbox"/> Changed mind</p> <p>2 <input type="checkbox"/> Wants to test later</p> <p>3 <input type="checkbox"/> Wants to test with partner</p> <p>4 <input type="checkbox"/> No test kits available</p> <p>9 <input type="checkbox"/> Tested today</p> <p>16. Has client had an HIV test before (tick one)</p> <p>0 <input type="checkbox"/> No</p> <p>1 <input type="checkbox"/> Yes, negative</p> <p>2 <input type="checkbox"/> Yes, positive</p> <p>3 <input type="checkbox"/> Yes, do not know result</p>	<p>17. HIV result today:</p> <p>Test no. 1 (tick one per test)</p> <p>0 <input type="checkbox"/> Negative</p> <p>1 <input type="checkbox"/> Positive</p> <p>2 <input type="checkbox"/> Inconclusive</p> <p>9 <input type="checkbox"/> Not done</p> <p>Test no. 2</p> <p>0 <input type="checkbox"/> Negative</p> <p>1 <input type="checkbox"/> Positive</p> <p>2 <input type="checkbox"/> Inconclusive</p> <p>9 <input type="checkbox"/> Not done</p> <p>Tie breaker:</p> <p>0 <input type="checkbox"/> Negative</p> <p>1 <input type="checkbox"/> Positive</p> <p>9 <input type="checkbox"/> Not done</p> <p>HIV Result</p> <p>0 <input type="checkbox"/> Neg</p> <p>1 <input type="checkbox"/> Pos</p> <p>2 <input type="checkbox"/> Inconclusive</p> <p>9 <input type="checkbox"/> Not done.</p> <p>18. Syphilis result today: (tick one)</p> <p>0 <input type="checkbox"/> Negative</p> <p>1 <input type="checkbox"/> Positive</p> <p>9 <input type="checkbox"/> Not done</p> <p>19. Couple Discordant (tick one)</p> <p>0 <input type="checkbox"/> No</p> <p>1 <input type="checkbox"/> Yes</p> <p>9 <input type="checkbox"/> N/A</p> <p>20. Condoms given (tick one)</p> <p>1 <input type="checkbox"/> Yes Num <input type="text"/></p> <p>2 <input type="checkbox"/> Refused</p> <p>3 <input type="checkbox"/> Client would rather get/buy condoms elsewhere</p> <p>4 <input type="checkbox"/> Out of stock</p> <p>8 <input type="checkbox"/> No condoms this Agency</p> <p>21. Referred to: (tick all that apply)</p> <p><input type="checkbox"/> Not referred</p> <p><input type="checkbox"/> HIV Care Specialist/ARV</p> <p><input type="checkbox"/> STI services</p> <p><input type="checkbox"/> In-patient services</p> <p><input type="checkbox"/> TB services</p> <p><input type="checkbox"/> PMTCT</p> <p><input type="checkbox"/> Family planning</p> <p><input type="checkbox"/> Other outpatient services</p> <p><input type="checkbox"/> Home based/family care</p> <p><input type="checkbox"/> Post test club</p> <p><input type="checkbox"/> Ongoing counselling</p> <p><input type="checkbox"/> Spiritual support</p> <p><input type="checkbox"/> PLWA support group</p> <p><input type="checkbox"/> Legal Services</p> <p>Other <input type="text"/></p>
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Appendix F: Key informant interview guide

Target: Key informants (members of the National VCT task force, heads of donor agencies supporting VCT scale up, Ministry of Health personnel involved in VCT scale up such as Medical Officers of Health)

OBJECTIVES:

1. To explore stakeholders' perceptions of the successes and challenges in the VCT scale up process in Kenya

2. To identify stakeholders' own roles and contributions to the scale up process

Key Informant *Designation*.....

Institution

Interviewer.....

Date.....

INTERVIEW GUIDE:

SCALE UP OF VCT

1. What are your views about the scale up of VCT in Kenya?
 - a. What do you regard as the successes of VCT scale up?
 - b. What do you regard as the challenges of VCT scale up?
2. Do you think this process has been influenced by any individuals?
 - a. How do you view your own role in the scale up of VCT?
 - b. What have been some of the challenges for you as an individual?
3. Do you have any concerns about VCT scale up in Kenya?

SCALE UP OF HIV TESTING

1. What are your views about the current testing methods in VCT sites?

2.
 - a. Are you familiar with HIV testing methods used in VCT sites?
 - b. If yes, which ones?
 - c. What are the advantages and disadvantages of the current blood tests?
 - d. In your opinion which groups of people should be performing rapid HIV testing in sites?

3.
 - a. What would you say about the sustainability and appropriateness of VCT counsellors doing HIV testing?
 - b. Why?

4.
 - a. Do think the recent controversy around non-lab personnel has affected VCT scale up? Has it affected clients? Has it affected organisations?
 - b. How do you think this can be resolved?

5. What recommendations would make about testing procedures and the role of the lab in this?

6. What recommendations would you make about the scale up (of both the counselling and testing aspects) from the Kenya experience for other countries?

7. Any other comments?

Thank you very much.

Appendix G: Index for taskforce interviews

1. General views on scale up

- a. Rapidity*
- b. Stigma reduction*
- c. Widespread knowledge of VCT since media campaign*

2. Elements contributing to successful scale up

- a. Government leadership and flexibility*
- b. Strategic alliances between stakeholders and the formation of a taskforce*
- c. A basic QA structure from the beginning.*
- d. Mass media*
- e. Choice of testing algorithm and allowing non-laboratory personnel to test*
- f. Influence of powerful personalities and or organisations*

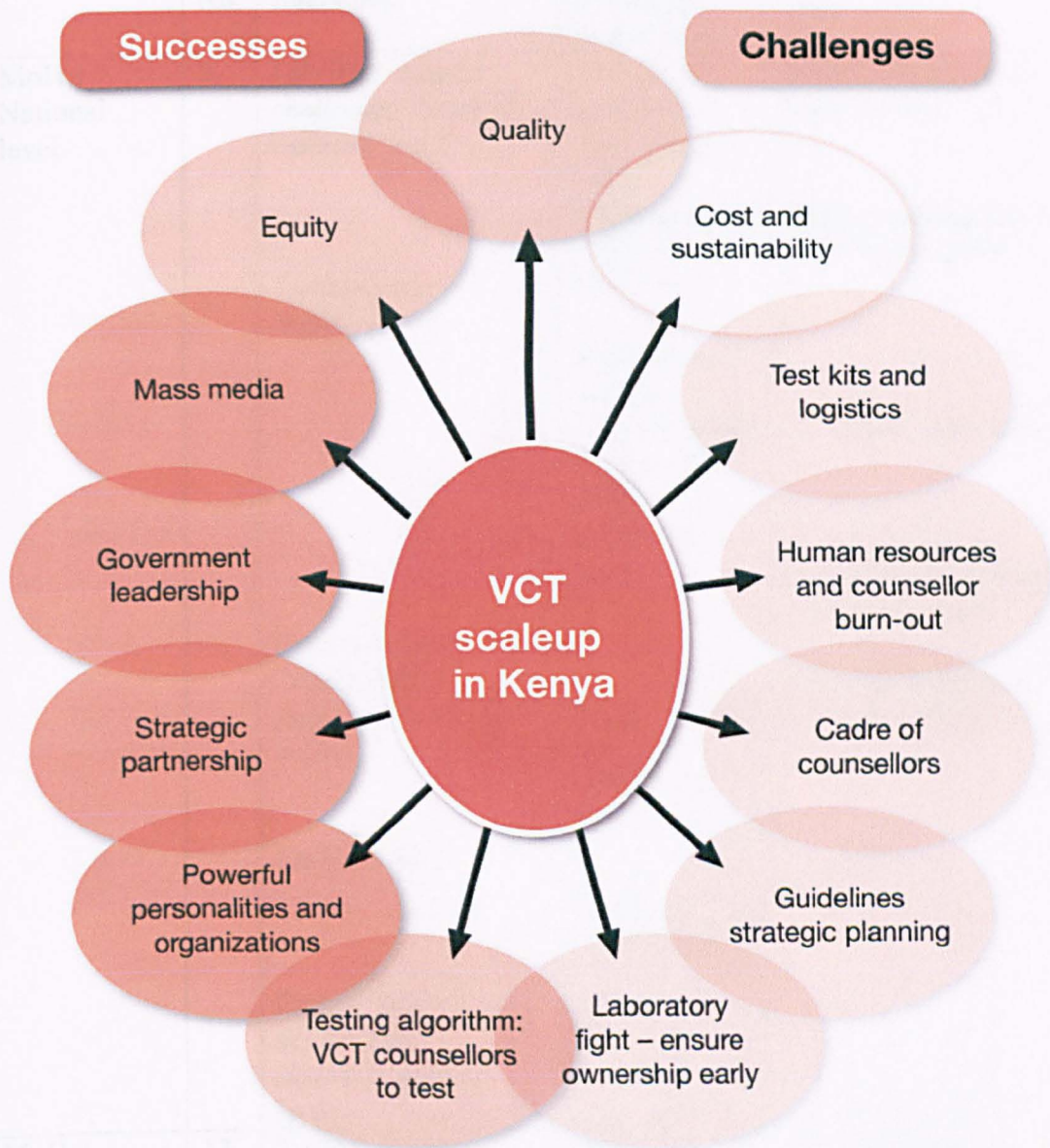
3. Challenges of rapid scale up

- a. Quality concerns*
- b. Human resources, and counsellor-burn out*
- c. Equity*
- d. Logistics and planning*
- e. Cost and sustainability*
- f. Lab fight*

4. Recommendations/What should have been done differently in retrospect

- a. QA systems*
- b. Strategic plan*
- c. Cadre of counsellors*
- d. Role of the lab*
- e. Ensure ownership*
- f. Referral and close linkages with HIV care*
- g. Rural areas*
- h. Innovation and flexibility*

Appendix H: 'Spider' used for identification of themes in analysis



Appendix I: Sample chart of analysis using framework approach
GROUP ONE: Ministry of Health

Respondent	Scale up of VCT in Kenya CHART 1.3: Challenges Ministry of Health Staff			
	No.	Interviews	Participant observation	Diary notes
MoH 1 National level	2	<p>Lab fight biggest challenge; <i>'brink of collapse'</i> (p.5)</p> <p>Turmoil over logistics (p.6)</p> <p>Quality issues <i>'standardised approach to QA is needed'</i></p> <p>Lack of staff</p> <p>Equity <i>'Will you be accused of discrimination?'</i> (p.6)</p>	<p>Also ref to guidelines devt. (early 2001)</p> <p>Meeting with DMS (Nov'01)</p> <p>procurement systems subcontracted to JSI – Nov 2000 stock outs 2003</p> <p>Support from govt for registration system</p> <p>Donors to fund salaries?</p>	<p>AKMLSO scientific meeting (Oct '02)</p> <p>Donor purchase test kits – 2003/March 2004</p> <p>No NQAT until 2003</p> <p>Note reluctance to engage with cadre issue</p> <p>Coverage a political imperative for govt</p>
MoH 2 National level	13	<p>Testing protocol – allowing lay counsellors</p> <p>Quality <i>'There has not been time to face the challenges and benefit from the lessons learnt.'</i></p> <p>Standard curriculum but quality of training depends on org.</p>	<p>Taskforce minutes Nov 2000</p> <p>Domination of VCT in QA systems</p> <p>Need for observed practice also mentioned</p>	<p>allowed expansion early and rapid</p> <p>Registration piloting Nov '01</p> <p>Arguments KAPC/CDC and LVCT over content and length of curriculum</p>

Appendix J: District, Health Centre and Counsellor Selection forms for use by DHMTs

District Selection Form

Name of incharge: _____ Name of candidate: _____
 Name of health ce DISTRICT NAME: _____ PMO
 NAME: _____
 NAME OF EVALUATOR: _____ DESIGNATION: _____
 TOTAL NUMBER OF EVALUATORS: _____

CATEGORY	QUESTIONS	SCORE	AverageSCORE
1. Location	Location within priority communities by USAID/FHI and Futures Group International / DFID 0 = no 1 = yes		
2. Recommendation	Recommendation by the provincial medical officer (Please score as a grade between 0 and 5) 0 = not recommended 5= strongly recommended		
3. DHMT	Active and enthusiastic DHMTS (please score between the following) 0= not at all active 4= active and keen 1= some enthusiasm 5= very active		
4. Motivation	Available staff and motivation within the district to carry out dedicated VCT activities (Please score as a grade between 0 and 5) 0=none 5=district fully committed and able to free staff		
5. Number of sites	Number of suitable sites identified using objective criteria (see site selection criteria)		
6. HIV/AIDS sensitisation	In your opinion what is the level of sensitisation on issues of HIV/AIDS in this district? Give the number of organisations doing HIV/AIDS work e.g. radio, church, school, CBOs etc		
7. Referral and support services	What is the level of on-going corollary activities, including MTCT, TB, Home-based care? Please state only those which happen on a regular and reliable basis. If people have been trained in home-based care, but do not carry it out then do not score this. Please state which services and score 1 for each. _____ _____		
8. Donor activity	Level of current donor activities in HIV services. Score 1 for each. Please state the names of donors, activity and location: _____ _____		
9. Geographical spread	Geographical spread designed to be representative of a variety of districts in various locations and cultures throughout the country. Include rural and urban. 0= none 3= reasonable 5= good spread		
10. Accessibility	Accessibility for the team 0= inaccessible 3= reasonable 1= with difficulty 5= very reasonable		
10. Lab facilities	Access to local lab facilities in case of discordant results 0= none, 1=yes but results more than two days, 2= yes same day		
Total score out of 60			
Comments			

Health Centre Selection Form

Name of health centre: _____	Name of In-charge: _____	Date: _____
/ /		
Name of District: _____	Name of Evaluator: _____	
Designation: _____		
Proposed Service (integrated or Stand-alone?) _____		
<i>Essential Criteria</i>		

(if you answer no to any of these then do not fill out the rest of the form)

1. Site supported by DHMT <input type="checkbox"/> 0= no 1= yes	2. Stated interest in implementing VCT <input type="checkbox"/> 0= no 1= yes
3. Qualified staff on the ground <input type="checkbox"/> 0= no 1= yes	4. Availability of referral systems for HIV/AIDS prevention <input type="checkbox"/>

Health centre		
1. Is it accessible to people by affordable public means or by walking? <input type="checkbox"/> 0= no 1= yes	2. Does it have a high client volume? <input type="checkbox"/> 0= no 1= yes	
3. How is the geographical distribution of the health centre? <input type="checkbox"/> 0= clustered near other sites 1= separate from other sites	4. Can the health centre free a staff member for dedicated VCT? <input type="checkbox"/> 0= no 1= yes	
5. Is there storage space for HIV test kits? <input type="checkbox"/> 0= no 1= yes	6. Would VCT be integrated with other services? <input type="checkbox"/> 0= no 1= yes	7. Are there existing lab facilities? <input type="checkbox"/> 0= no 1= yes

TOTAL out of 6

The Counselling Rooms		
8. Is there adequate space within the centre? <input type="checkbox"/> 0= no 1= yes	9. Is the room close to other services? <input type="checkbox"/> 0= no 1= yes	10. Is the room private? <input type="checkbox"/> 0= no 1= yes
11. Minimum of one desk and three chairs? <input type="checkbox"/> 0= no 1= yes	12. Are there facilities for the safe disposal of sharps? <input type="checkbox"/> 0= no 1= yes	

TOTAL out of 5

Staff motivation issues	
13. Are staffs willing to offer the services after training? <input type="checkbox"/> 0= no 1= yes	14. Are there any staff-led on going activities on HIV / AIDS <input type="checkbox"/> 0= no 1= yes

15. Are condoms freely available <input type="checkbox"/> 0=no 1=yes	16. Do staffs feel that HIV is a problem? <input type="checkbox"/> 0=no 1=yes
<i>TOTAL out of 3</i>	
<input type="checkbox"/>	
<i>Ability to Sustain the Benefits</i>	
16. Is there a cost recovery mechanism in place for other services 0=no 1=yes <input type="checkbox"/>	17. Is there a strong referral system in place with the nearest TB clinic? 0=no 1=yes <input type="checkbox"/>
18. Are local home-based care groups active? <input type="checkbox"/> 0=none 2=trained, but not active 3=active	18. Is initiative being taken with money from cost sharing? 0= no 1= yes <input type="checkbox"/>
<i>TOTAL out of 7</i>	
<input type="checkbox"/>	
<i>Community</i>	
19. What is the utilization level of the health centre by the community? 0=low 1=average 2=high <input type="checkbox"/>	20. Is the community ready for VCT? (HIV/AIDS sensitization level) <input type="checkbox"/> 0= no 1= yes
21. Is the health centre committee ready for the service? <input type="checkbox"/> 0= no 1= yes	22. Are the local leaders involved? <input type="checkbox"/> 0= no 1= yes
23a. Is field mobilization in progress? <input type="checkbox"/> 0= no 1= yes	23b Has anyone voluntary requested an HIV test in the last month? <input type="checkbox"/> 0= no 1= yes
<i>TOTAL out of 7</i>	
<input type="checkbox"/>	
<i>Comments</i>	
<i>SITE TOTAL out of 28</i>	
<input type="checkbox"/>	

Counsellor Selection Form

ESSENTIAL	DESIRED
<p>1. Is he or she interested? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>1. Previous gone to a counsellor training. <input type="checkbox"/> 0= no 1= yes but not certified 2= certified comments:</p>
<p>2. Is he or she recommended by own Health centre? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>2. Understands what counselling is? <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>3. Is he or she recommended by the DHMT? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>3. Counselling experience details: <input type="checkbox"/> 0=none 1= voluntary 2= professional comments:</p>
<p>4. Is he or she able to be released to dedicate VCT? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>4. Work previously in HIV/ AIDS field? <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>5. Does he or she have Counselling skills and potentials? e.g. Listening and non-judgmental, genuine <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>5. Previous worked in STI field? <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>6. Is he or she an O level graduate? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>6. Is age between 25 – 40 years? <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>7. Does he or she have any minimum certificate in medical field? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>7. Personal experience of VCT in their life <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>8. Knowledge of local language understanding and speaking. <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>8. Personal experience of HIV in their life <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>8. Have ability to remain for two years minimum. <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>9. Has knowledge of VCT guidelines. <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>10. Have ability to work in a team <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>10. Higher educational level. <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>11. Able to take initiative. <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>9. Previous experience of community mobilisation. <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>12. Is he or she reliable? <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>12. Able to handle questions about moral / ethical dilemmas? <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>13. Commitment to providing quality service. <input type="checkbox"/> 0= no 1= yes comments:</p>	<p>13. Shows self-awareness. <input type="checkbox"/> 0= no 1= yes comments:</p>
<p>3 Total score out of 13</p>	<p>4 Total score out of 15</p>

Appendix K: List of ‘soft’ resources used

Minutes of VCT taskforce

2000: Nov 21st

2001: Jan 26th, May 25th, Aug 29th, Sept 19th, Nov 7th, Nov 9th

2002: Mar 7th, May 16th, June 3rd, Sept 9th, Oct 14th, Dec 5th,

2003: Jan 21st, Apr 17th, June 30th, Sept 11th, Sept 18th, Nov 18th, Nov 25th

2004: Mar 10th, Mar 26th, May 18th

Presentations to the VCT taskforce

JSI ‘Logistics Issues in VCT’ Aug 23rd 2001

National Communications Strategy Draft Report, Sept 2001

Draft Report Training Curriculum May 21st 2001, Aug 12th 2001

Report of Fender and HIV subcommittee to NACC, Oct 31st 2001

*Report of the VCT accreditation satellite meeting and pilot, DSRS Conference, Nov,
2001*

Minutes and reports of VCT guidelines subcommittee

2000: Nov 21st and weekly thereafter until Feb 2001

2001: Mar 7-9th (residential guidelines retreat)

Minutes of VCT training subcommittee

2001: May 11th 2001, May 18th 2001 and fortnightly thereafter until May 2002

2002: Sept 4th, Oct 2- 4th (residential curriculum workshop, Dec 4th, Dec 9th,

Minutes of logistics subcommittee

2001: August 23rd

Minutes of National QA Team Meetings

2003: Dec 5th and monthly thereafter until May 18th 2004

Other materials

Correspondence with Kenya Association of Professional Counsellors, Feb 21st 2001, Mar 2nd 2001, January 11th 2002.

*Proceedings of the consultative technical meeting on HIV voluntary counseling and testing (VCT) 2000, 7-8th Sept. FHI, Nairobi, 2001. Available from:
http://www.fhi.org/en/HIVAIDS/pub/Archive/conf/rpts/Pro_Consult_Tech_Meeting_HI_V_VCT.htm*

*Proceedings of the consultative technical meeting on antiretroviral therapy in Kenya. 2001, Sept 19-21st. FHI, Nairobi 2002. Available from:
<http://www.fhi.org/NR/rdonlyres/ec6tzujtxizixodjqem3itkcw2wngljj32a2mzncvqgupq5sghlp7sp6ur2i5r6f4jiiisexrnvme/ARVkenyameeting.pdf>*