



HIV/AIDS Control in Kabarole District, Uganda

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Dr. Albert Kilian

This study is dedicated to those lost during the fight against HIV/AIDS:

Dr. Charles Masheija
Andrew Kyaligonza
Edison Nyesigye
Cliff Mboijana

Preface

Since the early 1980s, the HIV/AIDS epidemic has spread rapidly throughout the African continent. By the end of 2001 an estimated 29 million people were living with HIV in Africa. That same year 3.5 million people became newly infected with the disease and 2.2 million individuals died from AIDS-related causes. At the end of 2001, more than 14 million children worldwide had lost one or both parents to the epidemic.

By providing support to a number of projects, GTZ has been assisting African countries in their fight against the epidemic since 1987. Several district-based initiatives have been implemented, with particular emphasis on prevention, health information, and community involvement. In addition, an HIV/AIDS prevention and control component has been incorporated into numerous projects on primary health care, reproductive health and family planning.

Many lessons have been learnt during this period. The past six years have seen a measurable impact on the course of the epidemic, for example in two ongoing district-based control projects – in Tanzania’s Mbeya Region (the results are documented in “Hope for Tanzania”, see bibliography) and the Basic Health Services project in Kabarole, Uganda. This brochure provides an insight into the experience gained in Kabarole, highlighting ways of measuring success in the fight against HIV/AIDS.

The GTZ sector project “AIDS control in developing countries” was established in 1986. It supports the development and promotion of successful prevention and control strategies for HIV and other sexually transmitted diseases with special emphasis on an integrated, multi-sectoral approach. The project’s “good practices” series documents examples of HIV/AIDS work and provides evidence of reductions in HIV infection rates and changes in the sexual behaviour of the target population. The aim is to make this information available to national and international partners. We hope that by documenting these results we can contribute towards developing tools and instruments for HIV/AIDS control at a district level that can be applied in a great variety of settings.

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Abbreviations

ACP	AIDS Control Programme
AIC	AIDS Information Centre
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
BHS	Basic Health Services
CBO	Community Based Organization
DRC	Democratic Republic of Congo
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (German Technical Cooperation)
HIC	Health Information Centre
HIV	Human Immunodeficiency Virus
IEC	Information, Education, Communication
KAPB	Knowledge, Attitude, Practice and Behaviours
KfW	Kreditanstalt für Wiederaufbau (German Financial Cooperation)
MoH	Ministry of Health
NGO	Non-Governmental Organization
PCR	Polymerase Chain Reaction
RPR	Rapid Plasma Reagent
SOMARC	Social Marketing for Change
STD	Sexually Transmitted Diseases
TASO	The AIDS Support Organization
TPHA	Treponema pallidum Haemagglutination Assay
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	U.S. Agency for International Development
UVRI	Uganda Virus Research Institute
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

Introduction

In the border region between Tanzania and Uganda, west of Lake Victoria, the first AIDS cases were observed in the early 80s, and many believe that this area was one of the first foci of the HIV/AIDS epidemic in Africa. The infection spread rapidly along the major roads and, by 1990, AIDS cases had been reported in almost every district in the country. HIV prevalence among pregnant women peaked in 1990–1992, when rates of around 30% were seen in the major urban centres (Figure 1, Source: STD/AIDS Control Programme Uganda, surveillance report, June 2001), the highest rates seen anywhere in Africa at that time.

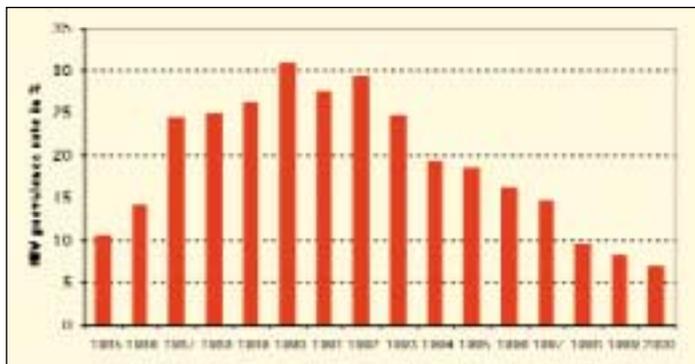


Figure 1: HIV prevalence in pregnant women in urban areas in Uganda

However, the situation changed after President Museveni came to power in 1986. He was one of the first African leaders to admit that his country had a serious HIV/AIDS problem. In 1987 the National AIDS Programme started and collaboration with WHO and the Global Programme on AIDS began¹. Supported by the strong political commitment of Uganda's leaders, a comprehensive, multi-sectoral response was implemented, coordinated by the Uganda AIDS Commission. This focused on institutional capacity building, public education for behavioural change, sexually transmitted diseases (STD) management, safe blood transfusion services and care and support for people with HIV/AIDS. These efforts were complemented by the work of many Non-Governmental Organizations (NGO) such as "The AIDS Support Organization" (TASO) or the "AIDS Information Centre" (AIC), and broad support by Uganda's development partners.

The first declines in HIV prevalence rates in pregnant women were noted by the sentinel surveillance system of the National AIDS Programme as early as 1993, but it was only in 1995 that a clear downward trend could be demonstrated. Although currently a fierce debate is going on in Uganda as to whether increased condom use or sexual abstinence is the main behavioural change behind these declines, there is some evidence

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¹A very good description of the Ugandan fight against AIDS can be found in Okware et al. (2001), see Bibliography.

for the positive effect of both these mechanisms. In 2000, seven years after the decline of the HIV prevalence rate, the number of annually reported AIDS-related deaths decreased for the first time, while life expectancy at birth shows once again an increasing trend, confirming the positive impact on the dynamic of the epidemic and the reduction of new infections.

The GTZ-supported HIV/AIDS programme in Western Uganda has to be seen in the context of the Ugandan fight against HIV/AIDS. It was one of the first district-based, comprehensive programmes and served as a model for the “going to scale” of many aspects of HIV/AIDS control².

Health Services In Kabarole District

The beginning

Between 1966 and 1986 Uganda underwent an era of civil strife, economic and political difficulties which resulted in serious social instability. During this difficult period of twenty years, health services, including other services and the country’s infrastructure, were either run down or in some cases completely destroyed.

In 1986 discussions were held between the Government of the Federal Republic of Germany and the Ugandan Ministry of Health on behalf of the Ugandan Government to explore the possibility of designing and implementing a Primary Health Care Project in Uganda.

As a result of these discussions, a feasibility study was conducted in May 1987, and the “Basic Health Services” (BHS) project, covering the districts of Kabarole and Bundibugyo in Western Uganda, was approved³.

Project activities commenced in October 1988 with an 8-month orientation phase, during which a comprehensive base-line assessment of health needs was carried out (Kielmann et al. 1989). In May 1989 a joint project planning workshop between the GTZ, the Ministry of Health (MoH), the two District Administrations and the District Health Team was held and, based on the findings of the needs assessment, an operational plan for project activities was designed and subsequently implemented.

² Kamugisba J, Kipp W: “District AIDS Control - The Kabarole District Health Team Experience”, see *Bibliography*.

³ Details about the “Basic Health Services Western Uganda” Project can be found in the GTZ brochure “Improving Health in the districts of Kabarole and Bundibugyo”, see *Bibliography*.

The project concept

The project concept is embedded into the overall policy of Ugandan-German development cooperation focusing on poverty alleviation (which includes health), the stabilization of economic progress and administrative reforms.

In the 12 years of the project, three conceptually distinct phases can be distinguished:

- The “build-up” phase, 1988–1994
- The “integration/consolidation” phase, 1994–2000
- The “phase-out/handover” phase, 2000–2005

Build-up

While the initial years (1988–1991) of the project were characterized by the physical reconstruction of infrastructure, capacity building of the District Health Teams and establishment of basic health services, the following years (1991–1994) concentrated on the introduction of specific disease control programmes to counter prevalent diseases. The first of these was the onchocerciasis control programme, which was started specifically at the request of the local population and the district authorities in the affected regions of Kabarole District. It was implemented as part of the “Basic Health Services” project, with significant support from the Bernhard-Nocht Institute for Tropical Medicine, Hamburg, Germany. This was followed by the HIV/AIDS control programme, which has been active in Uganda as a separately funded sector project since 1989, and shifted its activities from the Uganda Virus Research Institute (UVRI) to the districts of Kabarole and Bundibugyo in late 1990. Finally, an additional input came in 1993 in the form of the sector project “Malaria control in the framework of Primary Health Care”.

The emphasis of the concept during this phase was to “get things going” and, accordingly, activities relied heavily on donor input. The total number of project employees during this time reached 75, and the annual locally spent budget of all activities combined amounted to 1.2 million US\$.

Integration/consolidation

During the period 1994–2000 the concept then focused on consolidating achievements and integrating disease control programmes into routine district health services. In October 1994 funding for the sector project “Malaria control in the framework of Primary Health Care” ceased and activities were fully integrated into “Basic Health Services”. The same occurred with the HIV/AIDS project in July 1995. In order to maintain the range of activities with reduced funds, it was necessary to rationalize and start the process of a gradual shift of input from the donor to the districts and their health services. Subsequently the number of staff on the GTZ payroll (programme coordinators) was reduced and partially taken over by the district. The districts also took over an increasing share of running and maintenance costs while technical support was still being provided by the project. This process was slow but aimed at achieving long-term sustainability of the core successes of the project.

Phase-out/handover

In 2001 a new policy for development cooperation was implemented by the Federal German Ministry for Economic Cooperation and Development, limiting the areas of cooperation to a maximum of three for any partner country. The selection of these three areas was made in close collaboration with the partner governments. In the case of Uganda, health was not one of the selected areas. This implies that – although support of cross-cutting HIV/AIDS-related activities will continue in the selected areas of Ugandan-German cooperation the health project will be phased out in 2005. The last years of the project, therefore, will be characterized by further reductions in funds and personnel input. The emphasis is now shifting to securing achievements for the districts, assisting them in gaining support from other sources and, most importantly, helping them to document the experiences made over the years and provide evidence of the successes as well as the failures so that others can learn from them.

Throughout the project implementation, operational research and international collaboration have been an integral part of the concept. The fields of research cover a wide range of topics: from the feasibility of verbal autopsy in the assessment of child mortality and the “integrated management of the sick child”, to reasons for defaulters during Tuberculosis treatment, or the usefulness of microbiological techniques such as polymerase chain reaction (PCR) in the monitoring of antimalarial

drug resistance. Partners for these research activities not only come from Uganda and Germany, but also a number of other European countries and the USA. In addition, master's students from the Institute of Public Health and Department of Zoology, Makerere University, Kampala, the University of Heidelberg, Germany and the University of Alberta, Canada have completed theses within the project, together with a number of medical doctoral students from other German Universities.

The project area

Kabarole and Bundibugyo Districts are situated in the west of Uganda, separated from each other by the northern ridges of the Ruwenzori mountains (Figure 2). The population of the districts was calculated as 741,000 (Kabarole) and 116,000 (Bundibugyo) by the 1991 census, and

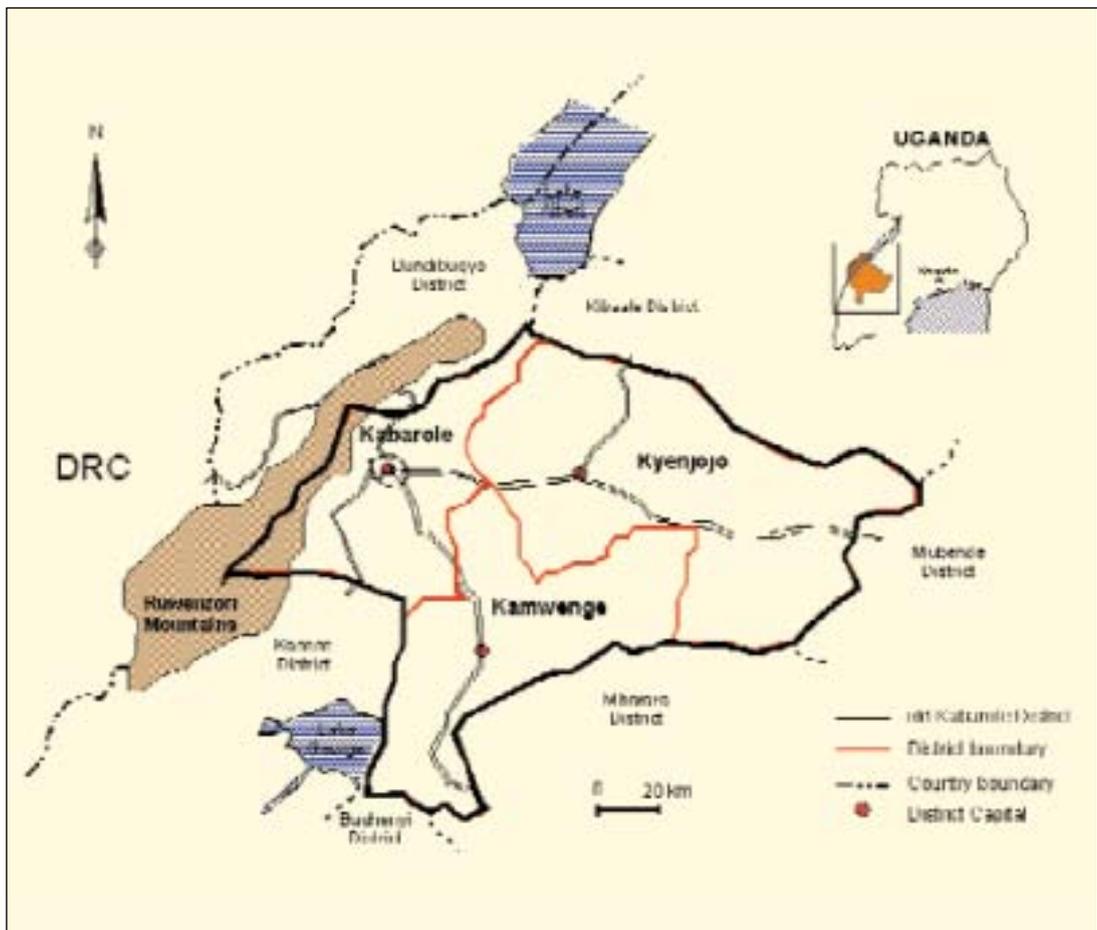


Figure 2: Map of the project area

in 2001 was estimated to have reached 975,776 in Kabarole (a growth rate of 3.1/year).

Kabarole is the core territory of the Toro Kingdom, and is thus mainly inhabited by the Batoro ethnic group, with Bakiga and Bakonjo also present in considerable numbers. In Bundibugyo the two main groups are Bwamba and Bakonjo. With tea manufacturing the only significant industry in the area, the majority of the population depend on subsistence farming. Matooke, maize, beans, millet and rice are the main staple foods, and tea, coffee, groundnuts and musa (a banana for liquor production) are grown as cash crops. In Bundibugyo, palm nuts, cocoa and vanilla are also grown. In both districts cattle keeping (for meat as well as diary farming) plays a significant role.

In 1997 Bundibugyo was hit by rebel activities and subsequently became a major area of operations of the Ugandan army. This situation of insecurity caused large numbers of “internally displaced people” to be placed in camps and resulted in the collapse of district social services. This situation continued until 2001. Therefore, project activities had to be stopped in 1997 and have not been taken up since. Consequently, this report only concentrates on HIV/AIDS activities in Kabarole District.

In 2000, a decision was made to split Kabarole District into three smaller districts, namely Kabarole, Kamwenge and Kyenjojo. However, since all three districts continue to be in the project area of “Basic Health Services Western Uganda”, refer to the project area in this report only as “Kabarole”.

Implementation of HIV/AIDS activities

The concept of modern health promotion and infectious disease control goes beyond the delivery of health services in the classical sense and addresses individual life styles and behaviours, and the participation

Some key events in HIV/AIDS implementation

1990	HIV/AIDS sector project shifts to Kabarole
1991	First counsellors trained by TASO HIV laboratory opened, surveillance begins Design and start of Home Based Care AIDS Information Center (AIC) inaugurated by President Museveni Condom market research initiated
1992	Foundation of a community theatre group First KAPB study among students “Engabu” condoms launched Workshops on STD management
1993	Community Initiative Programme starts AIC becomes “Health Information Centre” Introduction of puppet theatre
1994	STD clinic at the hospital opens
1995	Integration into the BHS, staff reductions
1996	Theatre group “Ntuuha” becomes independent
1997	STD programme supported by the World Bank School outreach programme begins
1998	“Engabu” brand handed over to the MoH
2000	MoH opens a VCT center at the hospital
2001	Introduction of the “Prevention of HIV Mother-to-Child Transmission” sector project

of the community and society as a whole. Nevertheless, a functioning health system containing high quality health services and management are absolutely necessary to achieve and sustain successes in disease control. This is particularly true for HIV/AIDS. Therefore, the implementation of the HIV/AIDS programme in Kabarole is closely linked to the progress made in general by the Basic Health Services Project in supporting the District Health Teams’ activities, and follows the three major phases described above (build-up, consolidation, phase-out, see Box). In addition, HIV/AIDS-specific changes in the concept have been made which reflect progress and discussions in the international fight against HIV/AIDS.

Changes to the concept over time

In the context of its international support, the German Government began among others a supraregional sector project on AIDS control in December 1986 which included Uganda and Malawi. The primary objective of AIDS control at that time was the introduction of facilities for HIV testing in order to be able to provide safe blood transfusions, to test patients and to establish an epidemiological monitoring and surveillance system for the infection. Accordingly, the Uganda Virus Research

Institute (UVRI) in Entebbe was supported with laboratory equipment, staff training and supplied with HIV tests, in close cooperation with the Max-von-Pettenkofer Institute in Munich, Germany. Health information campaigns for the general public were carried out as well.

In 1988 another, more comprehensive sector project “AIDS control in developing countries” was started which initially included Uganda and four other countries. Over time this project was continuously expanded, until it finally covered 16 countries⁴.

After laboratory facilities were functional at UVRI, and in view of the rapid spread of the HIV epidemic in East Africa, in 1989/90 it was felt that education and prevention were now the top priorities. With the Basic Health Services Project already in place, the shift of HIV/AIDS prevention activities to Kabarole was an obvious solution, particularly since reports of increasing AIDS cases suggested rather high levels of HIV in Fort Portal and other trading centres in Kabarole.

The two major tasks for the AIDS Control Programme (ACP) Kabarole at its start in 1990 were to:

- introduce optimal care for obvious AIDS cases, and
- reduce the incidence of new infections.

To address the second task in particular, it was crucial to increase the level of information on HIV/AIDS rapidly and to correct myths about its transmission. With this in mind, the project addressed the following areas:

- Further improvement of diagnostic facilities
- Studies on epidemiology and social aspects
- Improvement of patient care in health facilities
- Inclusion of AIDS as a topic in all training sessions for health workers
- Training of counsellors and starting of counselling services
- Promotion of condom use
- Development and provision of information materials on AIDS
- Intensive health education in schools
- Mass information with audio visual equipment
- Active involvement of religious leaders and other community leaders
- Stimulation of multi-sectoral cooperation in AIDS
- Installation of sero-surveillance of HIV infection rates.

⁴*Details in: “Responding to AIDS in the developing world: the GTZ contribution”, see Bibliography.*

As more research results on the epidemiology of HIV/AIDS became available, new elements increasingly gained in importance in the control efforts. One of these insights was the enhancing role of other concomitant sexually transmitted diseases in the transmission of HIV, particularly in the early stages of an epidemic, when transmission is mainly driven by so-called “high risk” sexual contacts. Other elements which were gaining importance in the early 90s were the positive effect of the involvement of people living with HIV/AIDS in the education campaigns and specifically in the fight against stigmatisation and discrimination, and the need to support those most vulnerable to the social and economic consequences of the epidemic. Also, as knowledge on HIV and AIDS increased, this knowledge had to be translated into actual behavioural change. Efforts during the second phase of the ACP in Kabarole (1993–1995) were directed towards:

- Promotion of “Safer sex” practices
- Strengthening of the STD Control Services
- Further improvement of the community health care safety and counselling services
- Improvement in the care of HIV-infected and AIDS patients
- Involvement of self-help groups in supporting widows and orphans
- Operational research and surveillance.

As HIV/AIDS became just one of many elements in the Basic Health Services Project after its integration into the latter in 1995, its share of total implementation activities was reduced to some extent, although the concept as such remained unchanged. However, after the United Nations International Conference on Population and Development in Cairo 1994, increasing focus was placed on reproductive and sexual health, with a strong emphasis on youth, leading to an intensification of the school outreach programme.

The final conceptual change came with the introduction of anti-retroviral drugs into the repertoire of HIV/AIDS control in developing countries in the late 90s. In the context of the German Government’s efforts to assist in the evaluation of the possible application of these drugs in rural African settings, a sector project on the prevention of HIV mother-to-child transmission using the drug Nevirapine was introduced in Kabarole in 2001.

Key elements of the programme

The HIV/AIDS component in Kabarole District comprises all the elements of a comprehensive programme. However, the conceptual and operational aspects of these have been described in great detail for the GTZ's work in the Mbeya Region in Tanzania⁵, and will for this reason not be repeated here. Rather, we present some key elements which retrospectively appear to have been central to the success of the programme with respect to the prevention of new HIV infections.

Behavioural change communication

The shift of control efforts from improving testing facilities for HIV, safe blood supply and prevention of infection within medical practice to direct prevention of new infections at an individual level implied that "Information, Education, Communication" (IEC) now formed the central part of the programme. Within these attempts to change knowledge, attitudes and behaviour relevant to HIV transmission, two distinct phases can be identified.

- In the first phase, the emphasis was on knowledge and attitudes. HIV/AIDS had to be publicized in the communities all the way down to the rural areas, ways of transmission explained, and a great

Key elements of the Secondary School Outreach Programme (1997-2000)

- Training sessions for teachers
- Student seminars addressing all aspects of sexual & reproductive health
- Individual counselling for students and teachers
- Video shows
- Focus groups with parents
- Training and supervision of school health services
- Foundation of "Straight Talk" Clubs

number of myths regarding transmission clarified. It was important to make "a lot of noise" about the HIV/AIDS programme to directly reach the targeted social groups. Accordingly, posters, billboards, T-shirts, drama performances, video shows and public events such as community meetings or volleyball and soccer tournaments were the main media used. Then, in 1996 a local FM radio station, "Voice of

Toro", opened in Kabarole: as more than 70 % of households had functioning radios, this henceforth became one of the most important media for communication.

⁵Jordan-Harder B et al: "Reason for Hope" AIDS Control and Prevention in Mbeya, Tanzania, see Bibliography.

- Once awareness of the problem had been raised and attitudes began to change, the focus shifted more to the translation of this knowledge into actual behavioural changes. This implied more “in depth” work, particularly with those who were still in the process of forming their sexual behavioural patterns, i.e. the younger generation. More “life skills” training and demonstrations of the practical options for preventive behaviour were involved.

The Straight Talk Programme

The Straight Talk newspaper was first published in 1993. This monthly four-page newspaper targets secondary schools students aged 15–19 and young adults in institutions of higher learning (20–24).

With a current print run of 156,600, it is posted to 3,246 addresses in and outside Uganda, 1,465 of which are secondary schools. It is also inserted into The New Vision newspaper and distributed through approximately 500 NGOs, CBOs, churches and individuals.

Straight Talk advocates safer sex, including abstinence, non-penetrative sex (setting sexual limits) and condom use. It is adolescent-driven and values-based, and also promotes life skills. The paper has a counselling page where a group of dedicated and adolescent-friendly counsellors and doctors advise readers.

Because of the paper’s popularity, Straight Talk Clubs have been formed in secondary schools and communities. These clubs are venues for open discussion about adolescent issues. Since 1994, over 230 Straight Talk Clubs have been independently formed. The Clubs are initiated by adolescents themselves to discuss further with their peers the messages of safer sex.



These phases cannot be seen as distinct in time, but overlap to a large extent. They represent rather changes in emphasis.

In the early “build-up” phase of the programme, the IEC campaign addressed a broad spectrum of social groups: political, religious and community leaders, traditional healers, health workers and teachers.

Young people both in and also, to some extent, also out of school were an equally important target group. Workshops on sexuality and video shows with HIV-relevant films addressing young people in particular were held, while drama and writing competitions between all secondary schools in the district as well as sports events were organized. With the foundation of “Youth Clubs”, attempts were also made to reach those out of school. The “Health Information Centre” (HIC) in Fort Portal was for many years a central place in town where young people could “hang out”, play games, read or just talk. Here, the “Straight Talk” newspaper (see box below) could

be obtained and was distributed to the other secondary schools from the HIC.

While training of teachers and school nurses in reproductive health issues and promotion of sexual education among headmasters had already started between 1993 and 1995, these attempts were intensified in the “post-Cairo” era. A school outreach programme on sexual and reproductive health started in 1997. It reached all secondary schools at least once per year and, from 1998 to 2000, also included all colleges and higher training institutions (see box page 11). During this time, more than 27,000 students and 1,250 teachers were reached through the seminars, and more than 220 individual counselling sessions with students were held.

Theatre for development

Drama and, more specifically, participatory drama performance at community level was another key element in the HIV/AIDS programme. In 1991 a drama group, the “Ntuuha Drama Performers”, was founded and trained by drama experts from the Makerere University in Kampala. The 16 member group travelled throughout the district and gave between 15 and 20 performances at village level each month. The group was retrained annually and later was called to perform at various occasions at the national level. In order to increase coverage and reduce transport costs, four “satellite groups” were formed at the county level.

During the “consolidation phase” of the Basic Health Services Project, when funds were reduced and sustainability came more into focus, the “Ntuuha Drama Performers” became an independent group which continues to exist today, performing on behalf of a great variety of health-related projects and programmes.

A special aspect of the use of theatre for HIV/AIDS-related communication was the introduction of puppet theatre in 1993. Trained by a German expert who had formerly worked with a well-known German group of puppeteers (the “Augsburger Puppenkiste”), two youth groups built their own puppets and, supported by the expert, designed plays which specifically targeted children and young people, while also gaining an audience among adults.

Condom promotion and marketing

From the very beginning it was clear that condom promotion and use would have to be one of the key interventions if the rate of HIV infection was to be reduced. However, in 1990 it was not yet possible in Uganda to openly discuss or advertise condoms due to strong resistance from public opinion, mainly from the Catholic church. In addition, there was no socially marketed condom available at that time.

On the other hand, the Basic Health Services Project had a cooperation agreement with the Bank for Reconstruction (KfW), the German institution for financial cooperation, to supply contraceptives to the district. This led to the idea of introducing a condom brand which would be specifically designed for local demands and hence more likely to become widely accepted.

In 1991 market base-line research was carried out in Kabarole by a consultant of the Population Services International Organization. The

result was that a particularly strong condom, brown in colour, with the name “Engabu” (i.e. “shield” in the local language) was favoured by the majority of interview partners⁶.

**The Engabu Condom
from the first draft to the MoH brand**



The first batch of 1 million Engabu condoms became available in 1992, accompanied by a broad promotion and marketing campaign. In spite of some initially rather critical press coverage in some national papers, the turnover was higher than expected and by 1993 the second batch (1.5 million) had been ordered. The peak of

condom “uptake” was reached in 1994, when almost 1 million condoms were sold or distributed in Kabarole alone (Figure 3), with Engabu condoms even turning up in the capital Kampala. However, the tendering process for the 3rd and final batch of condoms supported by KfW was delayed and stock ran out in 1995. By then another socially

⁶ *The creation of the Engabu brand is described in detail in “Social marketing in a rural African district”, Kipp et al. (1992), see Bibliography.*

marketed condom, “Protector”, had been introduced to Uganda (funded by USAID) and was beginning to reach peripheral areas of the country such as Kabarole.

In view of the end of financial support for Engabu and the existence of other brands of condoms, the question of what should happen to the brand arose. In 1995 intensive discussions took place with the SOMARC project (Social Marketing for Change), the distributor of the Protector condoms. In order to establish whether Engabu had a particular market niche which was complementary to the Protector and would, therefore, justify the further existence of the brand, a market survey was carried out jointly by The Futures Group and the GTZ in Kabarole in late 1996. The major findings were that:

- 68 % of consumers surveyed used Engabu most of the time, while 27% used Protector most of the time
- people living in villages and rural areas were more likely to use Engabu, while students and better educated people were more likely to use Protector
- Engabu was the condom brand perceived to be best against HIV/AIDS and STDs by salaried workers and those in business or trade, while Protector was preferred by students.

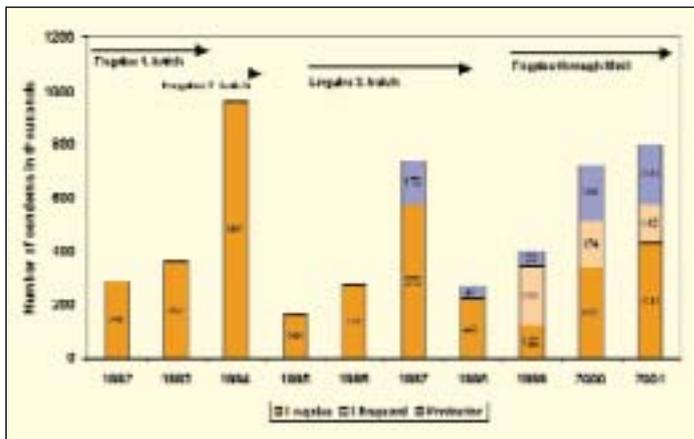


Figure 3: Sales and Distribution of Engabu and other socially marketed condoms in Kabarole District

Based on these results, a programme of joint promotion and distribution for Engabu and Protector was carried out in 1997/98, until the end of the SOMARC project.

In 1998, stocks of Engabu were running low and a decision had to be taken on the future of the brand. The Ministry of Health, which had previously only distributed unbranded

condoms but had subsequently realized that these, although free, were not as widely accepted as branded ones, showed interest in taking over Engabu as the nationally distributed “government” condom. Since 1999, Engabu has been available again, featuring an almost unchanged design

(see box, page 19) and, as can be seen in Figure 3, continues to be the preferred condom brand in the Kabarole area with a share of 54% in 2001. It is now competing against 2 different brands of socially marketed condoms (Lifeguard was introduced to Uganda in 1998 and is supported by KfW).

STD treatment

In addition to their role in the transmission of HIV, sexually transmitted diseases are a major health problem deserving attention in any programme aiming at improving the health of the population. Next to gonorrhoea, syphilis was the biggest problem at the beginning of the Basic Health Services Project, with data from pregnant women (sentinel surveillance) indicating that every fifth woman (20%) below the age of 24 had been exposed to the disease in the past.

By 1994, all public peripheral health facilities offering antenatal care had been equipped with a rapid syphilis detection test (RPR), and staff trained and regularly supervised. Any pregnant woman found positive was immediately treated with appropriate antibiotics.

A special STD clinic with full diagnostic capacity, specially trained staff, free treatment, favourable opening hours and adequate privacy was opened at the Fort Portal District Hospital. In the peripheral health facilities, where no laboratory capacity was available, the syndromic approach of STD treatment was introduced, and by 1996, 48% of all health units in Kabarole offered these services. However, the additional cost of drugs for STD treatment was high and could not be sustained during the “consolidation and integration phase” of the project. Fortunately, a large STD project run by the Ministry of Health and funded by the World Bank and other development partners stepped in and secured STD drug supply between 1997 and 2000.

Voluntary counselling and testing

With the establishment of an HIV laboratory at the district hospital in 1991, the basis was laid for the introduction of voluntary counselling and testing (VCT). In the same year, the first group of counsellors was trained and certified in Kampala by TASO⁷ during a three week course with a standardized curriculum. In total, 31 counsellors and 89 assistant counsellors were trained, while a good number received refresher

⁷ TASO, “The AIDS Support Organization” was the first and still is the largest NGO in Uganda to support the fight against HIV/AIDS.

training. The major difficulty in the establishment of counselling services at hospitals and peripheral health facilities at that time was the fact that no such positions existed in the staffing roster, while existing staff were not in the position to take up this time-consuming task in addition to their routine work. In the “build-up” phase the project, therefore, temporarily

paid counsellors a monthly allowance in order to guarantee that all patients tested in the hospitals received pre- and post-test counselling.

To provide VCT services not only for patients but also to the general public, and to encourage their utilization, the project started the “AIDS Information Centre” in 1991, where up to three counsellors were available every day. This centre, which was renamed the “Health Information Centre” (HIC) in 1993, served a variety of purposes and played an important

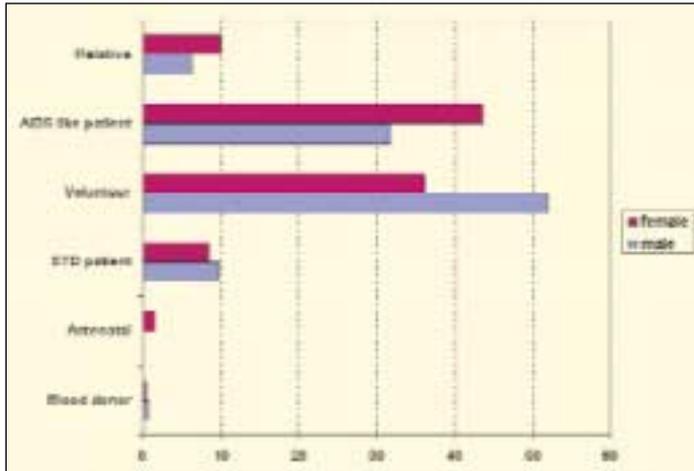


Figure 4: Distribution of clients for VCT in % of attending clients, 1998/99 (N=3113). “AIDS like” refers to patients with symptoms.

role in the IEC campaigns as well as serving as a base for the “Home Based Care” programme. From 1991 to 2001 between 1,000 and 1,500 clients for VCT were seen annually at the HIC. While the great majority of them were from all over Kabarole District, about 5% came from other districts. Among male clients, the largest proportion (52%) came for voluntary, often pre-marriage counselling and testing. In contrast, the largest group among females were women who requested testing because of AIDS-like symptoms (Figure 4). Although data from VCT clients cannot be considered “hard” evidence, it is interesting to note that the HIV prevalence rate among volunteers at the HIC continuously declined from 26.1% in 1991 to 11.8% in 1999.

While clients testing HIV negative were encouraged to remain so by practising “safer sex” and communicating their experience to others, those testing HIV positive needed further and continuous support. For this purpose, a Post Test Club was created, with its members regularly participating in outreach activities in the community programme (see below).

In the context of Uganda's "going to scale with VCT" programme, counselling and testing services have now been introduced by the MoH at the district hospital and two peripheral health centres, thus taking over the role of the HIC, which closed in 2001.

Community Initiatives/District Response Initiative

Since most behavioural patterns and social interactions have their roots in the moral and cultural values of the community, the community's participation in the process of behavioural changes and even more so in the mitigation of the social and economic effects of the HIV/AIDS epidemic was crucial.

The Community AIDS Initiative Programme started in 1993 with the training of 20 community trainers in participatory approaches specifically adopted for HIV/AIDS⁸. The major objectives were to

- engage communities in HIV/AIDS education and behavioural change processes through self organized drama groups, adequate education materials and involvement of "people living with HIV/AIDS", etc.
- provide basic counselling and care services at the community level for AIDS patients
- encourage communities to mobilize support for affected community members, particularly widows and orphans through income-generating activities and integration of orphans into other families.

Between 1993 and 1996 a total of 436 community workers were trained, 18 "Parish AIDS Committees" established and 22 community programmes supported. However, an assessment of the "District Response Initiative" undertaken jointly by GTZ/WHO/UNAIDS in 1997 revealed that, despite these commendable achievements, there was no broad coverage in the district and as yet insufficient coordination among the various players of the multi-sectoral HIV/AIDS response. This led to the reinforcement of the existing, but ineffective, "District AIDS Coordination Committee", which brings together all key stakeholders in the district, including NGOs. Sub-committees at the sub-county level were created and action plans developed. Although the process of involving all sectors of society in a more structured process of local resource mobilization and coordination has been quite slow, Kabarole is so far one of the very few districts where this approach does work: indeed, the Uganda AIDS Commission considers the "Kabarole experience" as a model for the country.

⁸ Carried out by "The AIDS Support Organization" (TASO) in Kampala.

Evidence of Success

As much as measurement of inputs and outputs of programme or project activities is needed for monitoring and evaluation, the ultimate evidence of success can only be measured by the impact on the HIV epidemic itself. This is particularly true in times when “evidence-based” decision-making has become one of the new paradigms of public health and development cooperation in general.

Indicators and Sources of Data

The ideal indicator of success for any HIV/AIDS programme clearly would be the number of new infections per population within a given period (incidence). This, however, is extremely difficult to measure and requires costly long-term follow-up of several thousand people (cohort studies). As a compromise, repeated measurement of HIV infection rates (sero-prevalence) in population groups which are easily accessible and represent trends in the general population can be used. This approach, called “sentinel surveillance”, has been recommended as the optimal monitoring instrument by WHO/UNAIDS, and such surveillance systems are being established in almost all African countries. Accordingly, the HIV prevalence rate among pregnant women aged 15–24 years⁹ attending antenatal care services was established as a core indicator for HIV/AIDS throughout the Basic Health Services Project.

The three major data sources for impact assessment in Kabarole

- Sentinel surveillance of HIV sero-prevalence among pregnant women aged 15–24 in three distinct sites 1991–2001 (N= 7,024)
- Repeated population-based sero-prevalence surveys in an urban setting, 1995 and 2000 (N= 2,581)
- Monitoring of sexual behaviour among secondary school students in 15 sentinel schools 1995–2001 (N= 6,235)

Assisted by the University of Munich (Prof. Frank von Sonnenburg), sentinel surveillance was established in Kabarole in 1991. Following standard WHO protocol, all women attending antenatal care (ANC) for the first time during

their current pregnancy were enrolled twice a year until the needed sample size was reached¹⁰. A blood sample was taken for rapid syphilis screening, the results of which were immediately communicated. Remaining blood was coded and tested at the central laboratory without a possible link to the women (i.e. unlinked, anonymous testing) for HIV as well as syphilis. Only age, marital and educational status were

⁹ This age group was shown to best reflect recent trends in HIV infection rates.

¹⁰ For a detailed description of the GTZ experience with HIV sentinel surveillance, see Bibliography.

recorded for each woman. While initially up to 8 sites were involved in surveillance, this number was later reduced to just three, representing an urban, rural and roadside setting.

In order to validate the HIV prevalence results from sentinel surveillance, cross-sectional household surveys were conducted jointly with the Ugandan Ministry of Health in all three settings between 1994 and 1995. In 2000 the survey in Fort Portal, the urban setting, was repeated once more, providing data to compare trends in HIV infection in pregnant woman with those observed in the general population.

With the first downward changes in HIV trends becoming visible in a number of developed as well as developing countries in the early 90s, precisely which behavioural changes were causing these trends became an increasingly important question. First, attempts were made to regularly measure key indicators for HIV/AIDS-relevant sexual behaviour in a standardized way in certain population groups. Although monitoring of behaviour is far more difficult to interpret than infection rates, this approach has now been generally recommended by UNAIDS, and is known as “second generation surveillance”¹¹.

In Kabarole, a first pilot run of a self-applied questionnaire on knowledge of key issues regarding HIV/AIDS and STDs and sexual behaviour among secondary school students (classes S2–S4) was carried out in 1994. Out of all the secondary schools in the district, 15 (7 urban and 8 rural) were selected. While small changes were made over time in the design of the questionnaire, the key questions remained constant over the years, as did the schools included in the monitoring. Between 1995 and 2001 six surveys were carried out (there was no survey in 1999). As for HIV surveillance, an attempt was made in 1998 to validate the results using repeat-questionnaires as well as focus group discussions.

Such efforts to obtain regular data on programme impact were complemented by a large number of studies and surveys on knowledge, attitudes, practices and behaviours (KAPB) with respect to reproductive and sexual health and the socio-economic impact of the HIV epidemic. These were conducted as master’s or doctoral theses for a number of academic institutions or as collaborative studies with the Ministry of Health, UNAIDS etc. Although these surveys were not always comparable in methodology and, therefore, did not easily provide trend information, they represented a valuable source for validating

¹¹“Guidelines for second generation surveillance of HIV”, UNAIDS 2000, see Bibliography.

results from monitoring and evaluation, and helped in steering the Kabarole HIV/AIDS programme.

Results

This section presents the major results from the monitoring and evaluation of the programme's impact and the consequences this had in the steering of the interventions. It cannot, however, present all the scientific details of the various studies and surveys which can be found in the publications listed in the Bibliography.

Trends in HIV and syphilis infection among pregnant women

By the time sentinel surveillance started in Kabarole in 1991, HIV infection rates among urban pregnant women were already quite high, 27% (more than 30% in the 15–19 year age group and 21% in the 20–24 year age group), while in the rural areas (rural and roadside combined) they reached little more than 10%. This suggested that the epidemic in Kabarole had started in the early 80s and that the region – compared with other parts of Uganda – was probably one of the most severely affected areas. Although the epidemic had to be considered a general one, i.e. had spread to the general population, infection rates were much higher in the urban centre, most likely associated with better educated people with greater mobility and more possibilities for “sexual networking“. Indeed, analysis of the educational status of the pregnant women in sentinel surveillance in the years 1991–1993 revealed significantly higher infection rates among those with secondary education compared to those with only primary or even no education (29.7% vs. 24.7% and 14.0% respectively for the 15–24 year age group). The data seemed to justify the concentration of behavioural change communication on the urban, better educated, young population in these early years.

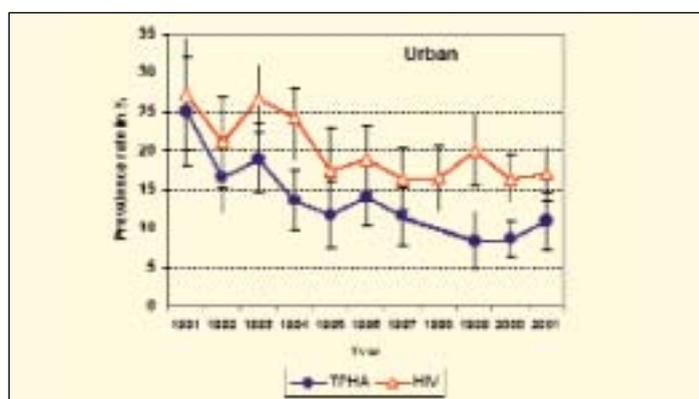


Figure 5: Trends in HIV and syphilis (TPHA) prevalence in pregnant women aged 15–24 years in the urban setting

Figures 5 and 6 show the trends from sentinel surveillance with respect to HIV and syphilis

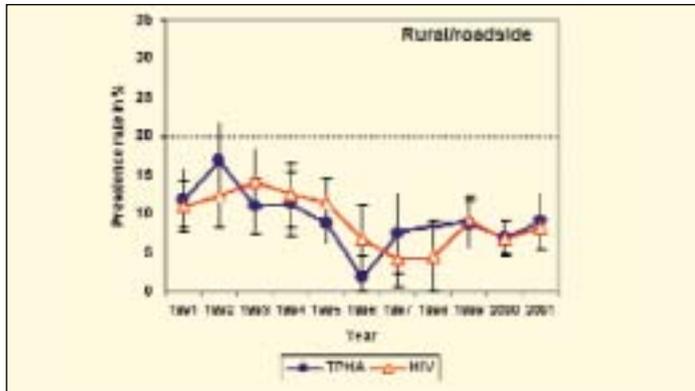


Figure 6: Trends in HIV and syphilis (TPHA) prevalence in pregnant women aged 15–24 years in the rural setting

for HIV and syphilis rates in the urban setting, and 50% and 49% respectively in the rural setting.

The largest decline of HIV rates was seen among the 15–19 year old women in the urban setting, falling from 33% in 1991 to 10–12% between 1999 and 2000 (a reduction of 67%). By that time HIV rates were almost at the same level as in the rural areas (between 8% and 10% in 15–19 year olds). This again suggested that in the urban setting the declines might have been larger due to the fact that here more “better educated” women were found who might have responded better to the prevention efforts. Looking at the change in HIV prevalence over time among the various educational groups confirmed this: the most dramatic reductions were seen among women with secondary education, whereas reductions among illiterate women were marginal at best.

Once it was clear that there were statistically significant declines in HIV and syphilis infection rates (i.e. it was certain that these changes were not due to chance), the question that had to be answered was whether these changes could have been caused by the interventions of the programme, as opposed to being merely the natural development of the HIV epidemic (the so-called saturation effect).

The answer was found with the help of mathematical modelling. Researchers¹³ at the University of Oxford, England, had developed a rather sophisticated HIV model able to take into account not only different age groups, sexual mixing patterns and sexual activity groups, but also allowing for varying changes in the risk of HIV transmission

¹² Care must be taken not to over-interpret changes from one time point to another since these data always present some “chance variation”; but rather to observe overall longer term trends.

¹³ Geoff Garnett and Simon Gregson.

over time¹⁴. With this model, and using all available epidemiological data on the HIV epidemic in Uganda, two different scenarios were run: one assuming no change in transmission-modifying behaviour; and another which assumed a continuous reduction in transmission probability between 1991 and 1995 (e.g. through increased condom use).

The results of the modelling exercise showed a convincingly close fit between the observed HIV rates from sentinel surveillance and the “behavioural change” model, particularly for the 15–19 year age group. The exercise furthermore practically excluded the hypothesis that the observed changes could have represented the “natural course of the epidemic”.

Evidence from population-based surveys

The sentinel surveillance data provided evidence that – among pregnant women – HIV infection rates were falling. But a good number of reasons

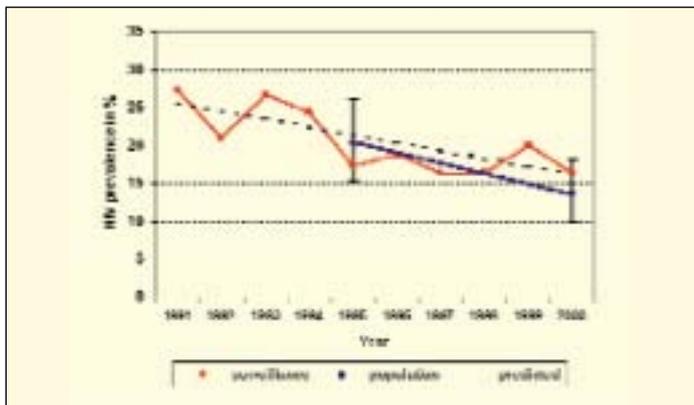


Figure 7: Comparison between sentinel surveillance data and population-based results for women aged 15-24 (urban setting)

can be brought forward to suggest that trends seen in pregnant women may not reflect those in the female population in general, not to mention the male population. By definition, all pregnant women must have been sexually active. Since this is usually not the case in the younger age groups of the general population, this may overestimate the true level of HIV infection. On the other hand, it has been shown that

women infected with HIV have reduced fertility and, hence, may not show up in antenatal care services. This, and the fact that women may use oral or injectable contraceptives but no condoms, could lead to an underestimation of the “true” population rates.

The population-based surveys on HIV prevalence in the rural, roadside and urban sites carried out between 1994 and 1995 demonstrated that the HIV infection rates, at least for the female population aged 15–24 years, were in the same range as those obtained from sentinel surveillance.

¹⁴A detailed description can be found in Kilian et al. *AIDS* 1999, see Bibliography.

But this was only one data point in time. How would surveillance compare to changes in the population over time?

The repeated survey in Fort Portal town in 2000 was crucial in providing these data. As Figure 7 shows, this survey demonstrated a very close correlation between results from sentinel surveillance and the actual trends in the female population, confirming that sentinel surveillance in pregnant women can indeed be used as a proxy for changes in the general population.

Figure 8 takes a closer look at the reductions in HIV infection rates in the urban population between 1995 and 2000. It shows that in almost all African settings, infection rates were significantly lower in males than females up to about 30 years and particularly before the age of 19. However, both males and females showed very similar reductions in the 15–29 year age group: from 16.3% to 8.3% (reduction 49%) for males and from 29.1% to 18.8% for females (a reduction of 35.6%).

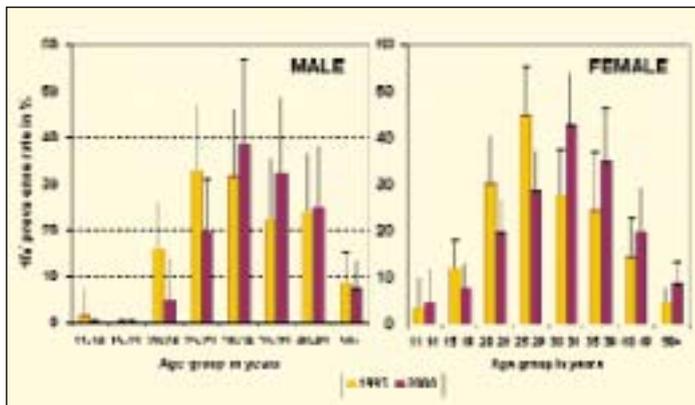


Figure 8: Reductions in population HIV infection rates among young men and women (urban setting)

These reductions are clearly within the range seen in sentinel surveillance (35–50%). One striking observation is that girls aged 11–14 did not show any changes at all, remaining with an infection rate of around 4%. This indicates that young girls continue to be one of the most vulnerable groups for HIV, and that little has changed in their vulnerability over time. It can be observed that in higher age groups (30 years and

above) there appears to be an increase in HIV prevalence in males as well as females. This, however, should not be mistaken for an actual increase in HIV incidence in these age groups. It can rather be explained by a cumulative effect: the majority of persons in 1995 in the age groups 25–29 and probably also 30–34 were still in their early latent period and – five years later – are still alive, adding to the prevalence; in addition, a delay in age at HIV infection during the period 1995–2000 will also lead to an increased proportion of people in their early latent period in the older age groups, further enhancing

the cumulative effect. The same phenomenon can be observed in epidemics where antiretroviral drugs become available.

Monitoring of behavioural changes among youth

Young, better educated people have been shown to have the highest risk of infection in the earlier stages of the epidemic and consequently have been a focus for the interventions of the HIV/AIDS programme. Sentinel surveillance data had also suggested that this group was most responsive to behavioural change messages. So, if significant changes in knowledge, attitudes, practices and behaviours were to be seen at all, they would most likely be visible among secondary school students. This was the rationale behind the establishment of behavioural monitoring of secondary school students.

The response from the students towards the questionnaire was good, with response rates well above 90% for all questions. Also, internal logic checks and comparisons with students who had answered the questionnaire the previous year did not suggest major flaws. In addition, a study in 1998 confirmed satisfactory reliability of data when the questionnaire was repeated in a sub-sample one week later (kappa index 0.63) as well as acceptable validity of answers (confirmed through focus group discussions)¹⁵. It was concluded that, within the limitations of self-reported sexual behaviour assessment in general, the results could be used to monitor the occurrence of HIV-related changes in behaviour.

Students were asked to list any methods they were aware of to prevent HIV and other STDs. As is shown in Figure 9, the use of condoms was the best known prevention method, increasing from 72% of students mentioning it in 1995 to 95% in 2001. Abstinence was initially only mentioned by 27% of students, but awareness of this option has dramatically increased over time, reaching 77% in 2001. In contrast, “sticking to one partner” showed no increasing trend but rather declined slightly. This would suggest that

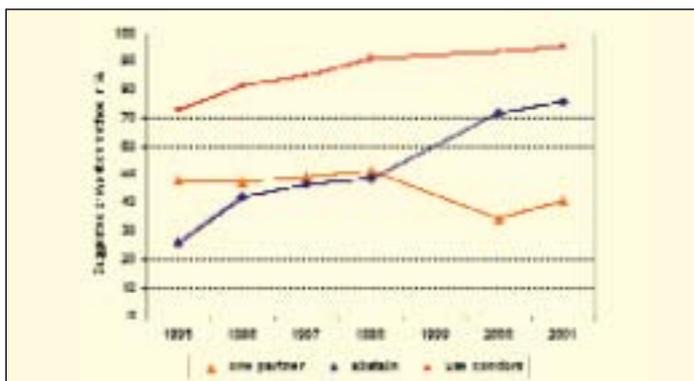


Figure 9: Knowledge of HIV prevention methods among secondary school students aged 12-20 years (both sexes)

¹⁵ O'Connor H: "Surveillance and validation of self-reported behaviour...", see Bibliography.

condom use and delaying sexual activity are the approaches preferred by the students. The question was then whether this would also be reflected in the reported sexual behaviour.

Average age at first sexual experience is the standard indicator to measure the onset of sexual activities. This, however, can only be reliably

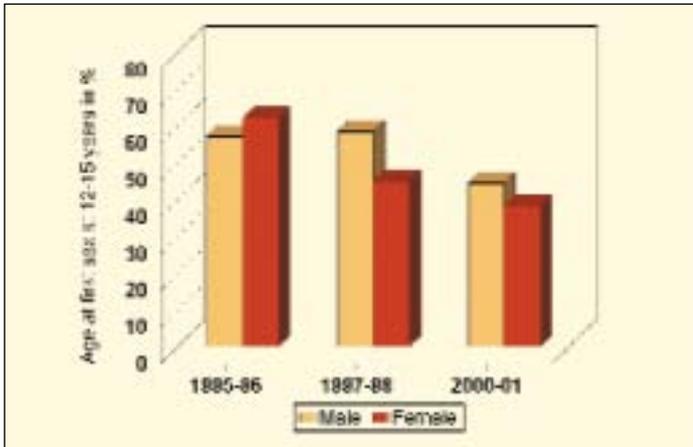


Figure 10: Trend in the proportion of 17-20 year old students who had their first sexual experience between 12 and 15 years of age

This delay in sexual activity becomes even more evident when changes in the proportion of students who started sex between the ages of 12 and 15 years is considered. As shown in Figure 10, this proportion

dropped from 57.2% to 44.6% for males (a reduction of 22%) and from 62.4% to 38.4% for females (a reduction of 38%), both statistically significant changes.

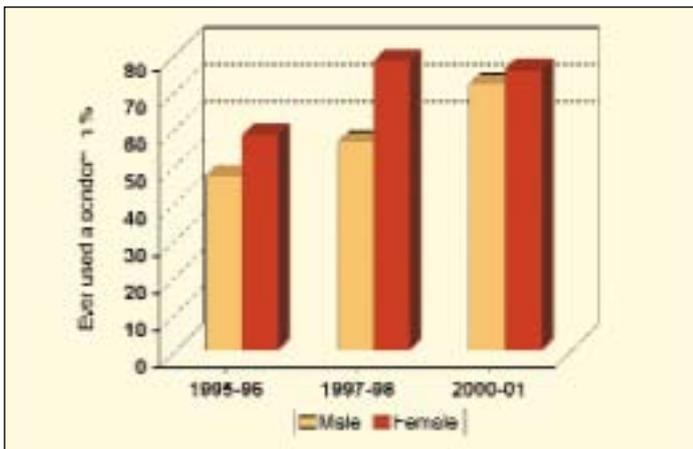


Figure 11: Trend in reported use of condoms (ever used) among sexually active students

In the same time period, the proportion of reported use of condoms (ever used) among students who were sexually active increased from 47.1% to 71.8% for males and from 58.1% to 76.1% for females (Figure 11). In 2001, 82% of

males as well as females reported that they or their partners had used a condom during recent sexual intercourse. While in 1996 84.9% of sexually active students knew where to get a condom, this proportion increased to 91.7% in 2000 and 94.7% in 2001, the most common sources mentioned being health facilities and shops.

In contrast to the changes observed in age at first sex and condom use, the data showed no change at all in the number of reported sexual partners, which remained at a median of 2. Also, the proportion of students reporting only one partner remained constant for males (35.6% in 1995/96 and 35.3% in 2000/01) and only slightly increased in females (from 43.8% to 50.3% respectively).

In 1997 a question was introduced as to whether students had ever been tested for HIV and whether they would be interested in being tested. While the proportion of students having had a HIV test did not change significantly over time (14% for males and 10% for females) the proportion interested in being tested increased from 65% in 1997 to 73% in 2001.

In summary, secondary school students had positively changed their behaviour with respect to the start of sexual activities as well as condom use, but not with respect to the number of lifetime sexual partners. These measurable behaviour changes matched very closely the changes in reported knowledge of preventive measures employed by these students. As far as comparisons of these reported indicators with the national level in Uganda or other regions in the country are available, they appear to be well above average¹⁶. In addition, comparison with several other studies undertaken among students in Kabarole suggests that the magnitude of the reported outcome is, all in all, correct.

Assessing the contribution of GTZ-supported activities

While it can be argued that ultimately the question of which activities were most influential in achieving an observable impact on the HIV/AIDS epidemic in Kabarole is irrelevant as long as the situation improved, it is, however important with respect to decisions on the focus and intensity of future interventions in the district or elsewhere.

To address this question, a study was carried out in 1999 by a master's student from the Institute of Public Health, Kampala¹⁷. From a list of all

¹⁶ For example, from the *Demographic and Health Survey 2000/2001*.

¹⁷ Banonya S: "Knowledge and sexual behaviour among secondary school students in Kabarole" 1999, see *Bibliography*.

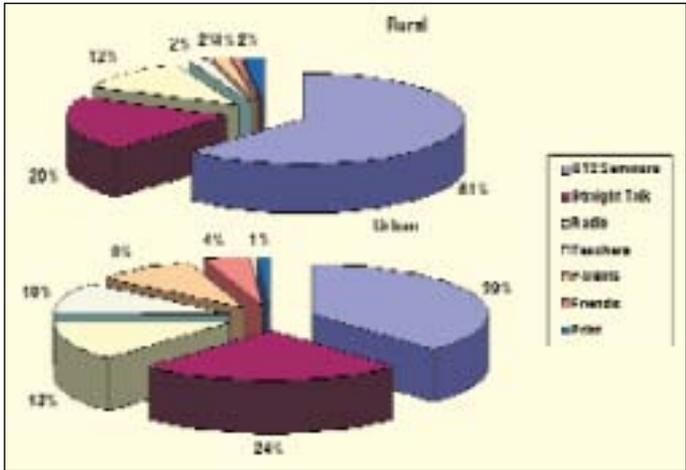


Figure 12: Preferred source of information among 200 randomly selected secondary school students, Kabarole 1999

secondary schools in the district, 20 were chosen and from each school 10 students selected. These 200 students were asked to answer questions regarding their experiences with various sources of information on sexual and reproductive health. As shown in Figure 12, students in rural as well as urban schools mentioned the GTZ-supported school outreach seminars as their preferred source of information, followed by the “Straight Talk” newspaper (compare box page 16) and radio programmes.

Lessons learned

The experience of HIV/AIDS control in Kabarole District provides clear evidence that it is possible to make a significant impact on the HIV epidemic in sub-Saharan Africa, particularly amongst the young population. However, the success cannot be seen in isolation but must rather be considered within the specific historical, epidemiological and societal situation in Uganda. This implies that it may not be possible to copy it one-to-one in any other country or region in Africa. Nevertheless, some general points of experience can be made and potentially utilized in other settings.

- Concerns of sustainability should be put aside at the beginning. The Kabarole example shows that an “all-out” approach was needed to achieve the critical momentum of change in individuals as well as in the community. Later on, during consolidation and phase-out, sustainability becomes more of a concern, and many of the programme components can be maintained at far lower cost. However, it is clear that the fight against the HIV/AIDS epidemic will require a long-term commitment by the development partners.
- HIV/AIDS control can only be successful if the country’s leadership shows strong political commitment from the national level down to the community level.

- Success in HIV prevention is possible and will be first observable in the young and educated population groups.
- In generalized HIV epidemics such as in Uganda, the core of the problem will, with increasing success HIV control, shift to the rural poor who have little education and often very limited options for decision-taking.
- Sufficient emphasis must be placed on monitoring and evaluating programme impacts. The tools are available and there is sufficient evidence that they do work. Such monitoring and evaluation can be effectively used to steer control efforts and support the drive for political commitment. There is, however, a need for coordination of data collection beyond the routine surveillance system (theses, special studies, etc.) in order to guarantee the maximum use of existing resources. The Kabarole experience shows that effective monitoring can be carried out using on average not more 10% of existing resources.
- Although effective HIV/AIDS control evidently requires a broad, multi-sectoral approach in order to affect changes in behaviours and lifestyles, it also depends on the functioning of the health system (public as well as private) to effectively deliver key services (e.g. VCT, STD treatment, care and support). Any HIV/AIDS programme should, therefore, be integrated into more general support to health system development and service delivery as a necessary, although in itself not completely sufficient, element of successful HIV/AIDS control.

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UNAIDS: **National AIDS Programmes: A guide for monitoring and evaluation**.

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Deutsche Gesellschaft für Technische Zusammenarbeit: **Responding to AIDS in the developing world: The GTZ contribution**.

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Jordan-Harder B, Koshuma YA, Pervilhac C, Vogel U: **Hope for Tanzania: Lessons learned from a decade of comprehensive AIDS control in Mbeya Region, Part I and II**, *GTZ*, Eschborn, Germany,

2001

**In the World Wide Web you will find further GTZ publications
about HIV/AIDS and development cooperation:
<http://www.gtz.de/aids>**



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