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From Treatment to Prevention: The Interplay Between HIV/AIDS Treatment Availability and HIV/AIDS Prevention Programming in Khayelitsha, South Africa

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ABSTRACT *There is a paucity of research that illustrates the interplay between HIV/AIDS treatment and prevention programs. We describe the central role that public access to antiretroviral (ARV) medication has played in the development and efficacy of HIV/AIDS prevention programming in Khayelitsha, a resource-poor township in the Western Cape of South Africa. We document the range of preventive interventions and services available in Khayelitsha since the early 1990s and explore the impact of ARV availability on prevention efforts and disease stigma on the basis of extensive in-depth interviews, supplemented by data collection. The information gathered suggests that the introduction of the mother-to-child-transmission (MTCT) prevention programs in 1999 and the three HIV treatment clinics run by Doctors Without Borders/Médecins Sans Frontières (MSF) in 2000 were turning points in the region's response to the HIV/AIDS epidemic. These programs have provided incentives for HIV testing, galvanized HIV/AIDS educators to reach populations most at risk, and decreased the HIV incidence rates in Khayeltisha compared to other areas in the Western Cape. Lessons learned in Khayelitsha about the value of treatment availability in facilitating prevention efforts can inform the development of comprehensive approaches to HIV/AIDS in other resource-poor areas.*

KEYWORDS *HIV/AIDS, HIV prevention, HIV treatment, MTCT, South Africa.*

INTRODUCTION

The appropriate distribution of resources among HIV/AIDS prevention and treatment programs has been extensively debated at local and international levels by direct care providers, policymakers, and funding agencies. Effectiveness analyses have suggested that prevention would be the most "cost effective."[1,2] However, the continually rising rate of HIV infection worldwide, especially in sub-Saharan Africa, suggests that prevention programming to date has had limited effectiveness.[3]

Inclusion of treatment as an integral component of HIV/AIDS health policy has recently been highlighted. The UNAIDS' *Report on the Global HIV/AIDS Epidemic 2002* declared a global priority of making "treatment and care for people with HIV/

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AIDS as fundamental to the AIDS response as is prevention."[4] This report marked the first time that an international HIV/AIDS funder publicly acknowledged the role of treatment in the global fight against HIV/AIDS.

Wariness still persists about the benefit of HIV/AIDS treatment in the greater context of HIV prevention.[5] The relatively high direct cost of HIV treatment, particularly in the absence of cost-competitive drugs (especially generics), conflict with other funding priorities, issues of limited infrastructure, and extensive staff training requirements make implementation of treatment programs problematic. The promise of an "anti-HIV" vaccine, although greatly diminished given the recent clinical trial failures, can detract from aggressive long-term planning for treatment programs.[6–8] A description of the impact made by the introduction of antiretrovirals (ARVs) on the dynamics of prevention programming is vital for informing both retrospective analysis and prospective policy-making, program implementation, and outcomes evaluation.

METHODS

To characterize the relationship between the success of prevention efforts and treatment availability, we first collected data about the availability of both prevention and treatment programs in the Western Cape of South Africa through in-depth interviews and review of published and unpublished data. In particular, we describe the nature and timing of services provided and their primary target audience. We solicited the impressions and assessments from key informants involved in both prevention and treatment programs.

Prevention programs were broadly defined: (1) organized events and activities in the community; (2) media coverage; (3) workshops open to the public or targeting a particular audience; (4) lectures in churches, schools, and universities; (5) voluntary HIV counseling and testing services (VCT), including counselor training; and (6) condom distribution and information about correct usage. Treatment programs were defined as ones incorporating medical management and ARV treatment to HIV-positive patients. Mother-to-child-transmission (MTCT) traditionally has been considered a prevention program. Nevertheless, it is also a practical medical intervention predicated on patient willingness to be tested for, and disclose, HIV status. In this respect, MTCT represents a first step into the realm of treatment even as its primary objective is to prevent transmission to the neonate. With the exception of a few programs in Western Cape after 2000 and in Kwa-Zulu Natal after 2002, MTCT programs were not available to most women in South Africa until at least 2003.[9]

Key informants were identified by two of the authors (NCL and RAM) with the assistance of Doctors Without Borders/Médecins Sans Frontières (MSF) and the treatment action campaign (TAC). Both organizations have offices in Khayelitsha, a township of approximately 400,000 in the Western Cape of South Africa. This township was chosen, in part, because it had the highest HIV prevalence rate in the province—HIV-positive test results are 5.21% in entire province, but 14.41% in Khayelitsha.[10] The scope of those interviewed was expanded to include other officials and program participants identified through both interviews with the initial informants and review of organizational records. Interviewees included members of the Department of Health, the District AIDS Task Team, TAC, other nongovernmental organizations (NGOs), and church groups that were involved in HIV/AIDS prevention programming during these periods (Tables 1 and 2).

TABLE 1. Interviews conducted by Rebecca A. Miksad, March–April 2004

Interviewee	Title/affiliation
Reverend Keith Benjamin	Provincial Executive Secretary of the Western Province Council of Churches, Cape Town
Linnea Brody	University of Cape Town, Cape Town
Di Cooper, PhD	Co-Director, Department of Public Health, Women's Health Research Unit, University of Cape Town
Eric Goemaere, MD	Head of Mission, Doctors Without Borders/Médecins Sans Frontières (MSF)-South Africa, Khayelitsha
Reverend Rachel Mash	Founder of Fikelela; AIDS Outreach Coordinator, AIDS Outreach Project of the Anglican Diocese of Cape Town
Ntsiki Matole	Medical Aid Representative; Catholic Church member, Langa, Cape Town
Bulelani Mvotho	Treatment Action Campaign, Cape Town
Noluvuyo Ngoboza	CACTUS of the Methodist Church; FACT of FAMSA; and St. Francis Anglican Church member, Mandela Park, Khayelitsha
Reverend Gugulethu Ningi	St. Michael's Anglican Church, Khayelitsha
Nannatte Rowland	Evangelical Church member
Reverend Spiwo Xapile, JL, PhD	Zwane Memorial Church, Gugulethu, Cape Town

Semi-structured interviews were conducted with those key informants available in Khayelitsha and in the Western Cape of South Africa during the periods of study: June–August 2002 and March–April 2004. Interviews were conducted in the interviewee's place of employment. Standardized initial questions sought to clarify the following: (1) the individual's role in HIV/AIDS initiatives both within and beyond their organizational affiliation; (2) examples of programs implemented with his or her involvement; (3) subjective impressions of program efficacy; (4) quantitative measurements of the impact of HIV/AIDS programs; and (5) colleagues or opponents who would be able either to corroborate, complete, or dispute points raised during these interviews. Corroborative evidence regarding program content and attendance, as well as program assessment, were collected. As appropriate, additional questions were asked to gain more insight into the issues raised by the interviewee.

In addition, data regarding VCT, sexually transmitted diseases (STDs), HIV testing, condom distribution, and teenage pregnancy, both published and unpublished, were collected from city and provincial authorities, from NGOs, and other stakeholders. We made a conscious effort to meet with as broad a range of individuals involved in governmental and nongovernmental organizations as possible. Nevertheless, we acknowledge the potential bias of having the initial interviewees identified by the HIV treatment advocacy community.

DISCUSSION

Description of Prevention Programs and Services: 1990–2002

Before 1994, the year apartheid ended in South Africa, very few programs existed to address the growing HIV epidemic. Several preliminary efforts can, however, be traced to 1992 initiatives. At a national level, several advocacy groups had made

TABLE 2. Interviews conducted by Nomi C. Levy, July–August 2002

Interviewee	Title/affiliation
Lawrence S. Bitalo, MD	Director, Primary Health Care (CHSO)-Metro Region
Stephan Blom, PhD	Clinical Psychologist, Cape Consultancy, Cape Town
Sister Pat Collis	Area Manager, Department of Health, City of Tygerberg
Matthew Damange	Counselor, Site B Youth Center, Khayelitsha
Nomfundo Wyhnia Dubula	Treatment Literacy Coordinator, Western Cape, Treatment Action Campaign (TAC)
Pat Francis	Program Director, Wola Nani, Khayelitsha
Eric Goemaere, MD	Head of Mission, Médecins Sans Frontières (MSF)-South Africa, Khayelitsha
Sister Colleen Jacobs	Retired, Red Cross Society, Wynberg
Sister Anita Jason	Red Cross Society, Wynberg
Linda Kantor	Former Counselor, AIDS Training, Information and Counseling Centres (ATICC)
Saadiq Kariem, MD	ANC National Health Secretary, Public Health Registrar, University of Cape Town
Stephanie Kilroe	LifeLine, Khayelitsha
Francoise Louis, MD	MSF, Site B Clinic, Khayelitsha
Anne Lebethe Mabena	Hope Worldwide, Coordinator of HIV Prevention/Awareness Programs
Bob Mash, MD	Michael M Clinic, Khayelitsha
Sister Harriet Pumla Mayaba	Red Cross Society, Nyanga
Epaph Mbezi	Former Station Manager, Radio Zibonele, Cape Town
Sister Martha Mpasa	Wola Nani, Khayelitsha
Sam Mori	Former Station Manager, Radio Zibonele, Cape Town
Gloria Mqanqani	Former Coordinator of Khayelitsha AIDS Awareness Group (KAAG), Cape Town
Sister Claribel Nomala	Nurse Coordinator, Red Cross Society, Wynberg
Catherine Orrell, MD	Somerset Hospital, University of Cape Town
Colwyn Poole	Treatment Action Campaign and MSF-South Africa
Hugo Theron, PhD	Department of Psychiatry, Tygerberg Hospital
Vladimir Vlasiu, MD	Acting Chief Medical Officer, Site B Office, Khayelitsha
Thembeka Zibi	Former AIDS Coordinator in Nyanga and Khayelitsha, current Human Resources Training Coordinator, City of Tygerberg

tentative steps in the early 1990s to address HIV/AIDS in national policy and in education. The National AIDS Congress of South Africa (NACOSA), with international funding, hired executives to coordinate and lead lobbying efforts to establish an AIDS plan for postapartheid South Africa.

Education efforts focused both on health care workers and lay people. The NGO National Progressive Primary Health Care (NPPHC) association began to include AIDS awareness and HIV prevention components in their community health worker training and health education programs [Thembeka Zibi, AIDS Coordinator in Nyanga (1992-1997) and Khayelitsha (1997-2001), oral communication, August 7, 2002]. The AIDS Training, Information and Counseling Centres (ATICC) were at the forefront of developing counseling and education programs about HIV/AIDS, targeted specifically to health care professionals. This program differed from groups such as LifeLine, which focused on educating lay counselors. The Red Cross Society (RCS) also began to introduce HIV/AIDS into the drug

education curriculum for school-aged children, although no sex-education was allowed at that time. This step coincided with the expansion of its home-based care program to include AIDS patients (Sister Colleen Jacobs, oral communication, July 16, 2002).

Throughout the 1990s, development of prevention programs was underway in two, often separate, arenas: governmental agencies and nongovernmental organizations. In the governmental arena, at national and provincial levels, the enthusiasm of the postapartheid era prompted development of plans to reform the health care system and to address HIV within the context of this reorganized system. For example, an HIV/AIDS Task Group prepared two extensive district health plans before 1997. Based on these plans, and anticipating monthly reporting of such data as HIV-positive test results and STD rates, two HIV/AIDS teams were established: (1) a Khayelitsha District Management Team and (2) an Information Team with epidemiological and biostatistics focus on HIV/AIDS (Dr. Bob Mash, oral communication, July 3, 2002). An AIDS program coordinator also was appointed in Khayelitsha in 1997, although the budget allocation was limited to her salary and did not include program funding.

By 1997, however, in the absence of funding and without strong national government commitment to HIV/AIDS policy development and implementation, a general disillusionment began to settle in. Little discernable headway was made on HIV/AIDS issues nationally. In 1998, an estimated one in seven newly infected people on the African continent was to be found in South Africa. By 1999, the year Thabo Mbeki officially assumed the African National Congress (ANC) mantle from Nelson Mandela, the United Nations and WHO were reporting that 20% of South African adults were HIV positive, up from 13% in 1997.[11,12] In this context, the initiation of Khayelitsha's MTCT prevention program in January 1999 proved a promising, but narrowly focused, development. Significantly, the MTCT program was amongst the first available in the country. MTCT programs did not scale up nationally until after the TAC's successful suit against the government in 2001;[13] this verdict was upheld in 2002, but would not make programmatic headway until late 2003.[14] One notable exception during this period was the introduction in 1994 of a dedicated HIV clinical research unit at Somerset Hospital, a teaching hospital in Cape Town.* However, by necessity, the type of person cared for by hospital-based research programs often represent a special subgroup of patients.

After 1994, various NGOs began to acknowledge the growing HIV/AIDS problem, as reflected in activities designed to raise awareness. This change coincided with the absorption of NACOSA into the National AIDS Council after the first postapartheid elections. According to one HIV/AIDS coordinator involved at the time, its leadership believed that the national AIDS policy agenda for which they had advocated was indeed being taken up by the new national government, headed by the ruling ANC (Thembeka Zibi, oral communication, August 7, 2002).

Although relatively disorganized and underfunded, various NGO-sponsored approaches to HIV prevention were attempted, with varying levels of enthusiasm and impact. The RCS' early efforts in education and home-based care expanded from 1995 to include support groups for HIV-positive people in Khayelitsha, and the following year in Nyanga, another underserved township in the region. Condom bashes were initiated in "taxi" ranks and areas outside Khayeltisha (e.g., Houte Bay) to increase awareness through direct outreach by trained health care workers,

*Now the Desmond Tutu HIV Centre, Institute of Infectious Diseases and Molecular Medicine, University of Cape Town.

dissemination of information, and distribution of free condoms. Taxis, which are generally 15 seater passenger vans, serve as the primary local and national transportation system for South Africa's poor. These condom bash programs were held twice a month, each time at a different location (Sister Martha Mpasa, Wola Nani, oral communication, July 20, 2002).

The Khayelitsha AIDS Awareness Group (KAAG) was organized in 1997, with broad representation of preexisting actors. This group focused efforts particularly around four established international and national HIV/AIDS events (Gloria Mqanqani, oral communication, July 1, 2002; Thembeka Zibi, oral communication, August 7, 2002):

- Condom Week (February, since 1998)
- Candlelight Memorial (May, since 1998)
- School AIDS Week (September, since 1998)
- World AIDS Day (December, since 1997)

Over the years, collaboration grew among individuals involved in the various NGO programs described. However, members consistently reported frustration with the perceived lack of acknowledgement by their respective organizations. In particular, they found it difficult to secure financial support for HIV-related programs. Moreover, both organizers and government officials suggested that the persistent stigma of HIV/AIDS kept overall attendance at these events relatively low.

Description of Treatment Programs in Khayelitsha Since 1999

In January 1999, the Western Cape provincial government opened an MTCT program in a township with the highest HIV prevalence rate in the province, Khayelitsha. Later that year, at the request of the provincial government, MSF provided support to MTCT program development and monitoring. The details of the development of this MTCT program vary somewhat among interviewees. However, there is consensus that it took about 1 year for the pilot program in Khayelitsha to be recognized by the national government and for the program to be considered a permanent one, with the potential to expand availability of services.

The expansion of medical management of HIV/AIDS symptoms and opportunistic infection to nonpregnant adults began in April 2000, although ARVs were not available at this time. In cooperation with provincial authorities, MSF opened three infectious disease clinics in Khayelitsha, each associated with a preexisting government-operated primary health care facility.

The ultimate MSF objective was to demonstrate that ARV medical management could be introduced effectively through existing governmental medical care structures in resource-poor settings to a highly stigmatized and underserved HIV-positive patient population. The MSF "treatment option," when introduced in 2000, was the first of its kind available in the South African public sector. ARVs were distributed from May 2001. The implications of MSF's success, as documented elsewhere, continue to inform current health policy debates internationally.[15,16]

LINKING KNOWLEDGE OF HIV STATUS WITH PREVENTION

There was broad consensus amongst all those interviewed that until MTCT prevention programs were available, few patients were willing to be tested for, or to

disclose, their HIV status. Both government officials and health care workers asserted consistently that more women were more willing to address issues surrounding HIV/AIDS when they had the opportunity to prevent transmission to their unborn children.

Those involved with MTCT noted that "progress" proceeded gradually, patient-by-patient. Women began to agree to testing, and HIV-positive women began to share their status and stories with other women, pregnant or not. Incentives to encourage regular attendance included the Red Cross strategy of providing food parcels (including infant formula) to the mother during the child's first year of life. In 2000, the number of people participating in HIV-positive support groups began to increase noticeably. Over time, particularly from 2001, more males (usually partners of HIV-positive mothers) began to participate in the support groups as well (Sister Anita Jason, Red Cross Society, Wynberg, oral communication, July 23, 2002; Anne Lebethe Mabena, oral communication, July 16, 2002).

The RCS was a major source of referrals to Wola Nani, an NGO established in 1994 providing focal points for support groups, counseling, home-based care, and food packages to HIV-positive mothers. In 1999, Wola Nani received a private grant to increase staffing, allowing for expansion of its services. The introduction of MTCT (particularly at the Michael M and Site B hospitals in Khayelitsha) enhanced the group's ability to identify a target audience for its programs. Membership has risen from an original group of 20 to a group of 260, with a waiting list for entry.[17]

Role of the Churches

The role of the churches in addressing the HIV/AIDS pandemic in South Africa is best described as a series of notable exceptions against a backdrop of silence. The strong social role of South African churches makes them an important stakeholder. Although some churches openly condemn HIV-positive members, interviewees report that quiet rejection is more common. The silence appears to stem from denial of the extent of the disease, ignorance about the causes and treatments, and traditional stances on sexual morality. Among those religious organizations and leaders that do speak out about HIV, there are two—but opposite—positions: (1) HIV is punishment for immorality and demands repentance or (2) active engagement with the community is necessary to destigmatize HIV, educate people in prevention techniques, and properly care for those living with HIV.

A slow rise in awareness and a concomitant increase in church efforts to deal with HIV coincided with the rise in success of nongovernmental projects, including the opening of the MSF-run clinics in Khayelitsha and the education and advocacy activities of TAC, as described below.

On the national level, churches first acknowledged the HIV/AIDS epidemic in 1998 with the formation of an interfaith National Religious Association for Social Development at the Annual Conference of the Ecumenical Society of Southern Africa. This Association was ostensibly formed in response to the Minister of Social Development's challenge that the religious sector organize itself. Large-scale activities, however, got underway only in late 2001, when the group cooperated with the National Department of Health to run education workshops.

Although many promising and exceptional efforts can be identified within the religious sector, the Anglican Church in the Western Cape has been at the forefront. The vocal activism of Archbishop Desmond Tutu continues to stand in stark contrast to other prominent religious leaders. His outspoken promotion of the use of condoms has created controversy in the general public and within the church community.[18]

St. Michael's Church in Khayelitsha began as early as 1995 to address HIV/AIDS within the local parish. In 2001, their Reverend founded a program named Fikelela, whose slogan is "This church is HIV/AIDS friendly."[19] The success of this program led to an Anglican Church of South Africa national mandate that all Anglican churches emulate the Fikelela program locally. This mandate expanded Fikelela's impact from the local to the provincial and national level and was backed by organizational and financial support. The expanded Fikelela program now includes support groups, home-based care, youth training, and HIV/AIDS task groups at more than 40 Anglican churches.

Fikelela also runs an orphanage for HIV-positive children in Khayelitsha, to whom it supplies ARVs. In March 2004, in cooperation with the University of Cape Town, the orphanage opened a health clinic to provide ARVs and medical care to non-orphaned children as well. The financial support of the Anglican church for these activities is supplemented by private donations, particularly from international donors.

Despite a smattering of HIV/AIDS activities supported by churches for close to a decade, it was not until September 2003 that the South African Church Leaders Association (SACLA) designated HIV/AIDS a priority alongside poverty. By 2004, many of the other Christian denominations, including Catholics, Lutherans, Methodists, and the Salvation Army, had made official efforts to address HIV/AIDS, with varying success. Coordination of church-based services and education has been attempted, but these efforts remain fragmented.

Role of the Media

There was consensus amongst those interviewed that, with the exception of coverage in the run-up to the 2000 International AIDS conference in Durban, there was scant media coverage until 2001. Consistent programming on Radio Zibonele to address HIV awareness and prevention was initiated at the request of TAC in May 2001. With roots in the social activism of antiapartheid efforts, Radio Zibonele is a local, largely volunteer-run public radio station broadcasting only in Xhosa, the predominant African language spoken in Khayelitsha. Programming, however, has faltered as the station continues to have financial difficulties. The newspaper *Mail & Guardian* runs a weekly article entitled "HIV/AIDS Barometer" with various facts and figures. Several television programs, including *Isidingo*, *Back Stage*, *Soul City*, and *Tsa Tsa* have also incorporated HIV/AIDS into their story lines.

Treatment Availability Influences Prevention

A clearer picture of the HIV/AIDS epidemic emerged after 1999, as the MTCT program provided a framework for and helped promote a culture of data collection (Stefan Blum, oral communication, August 2002). For example, compilation of monthly district reporting of HIV counseling and testing did not begin until April 2002. Our efforts to collect primary documents revealed an absence of systematic and reliable data collection and archiving throughout the 1990s.

Interviews with officers from various organizations involved in HIV-related programs reinforced the impression that awareness of the MTCT program (and increasing belief in the efficacy of peri-partum ARV regimens) began to impact preventive program development and participation sometime in early 2000. Rising numbers of VCT and MTCT "uptakes" (the term for any patient accepting services), as well as increased condom availability and use from that period, as noted below, supports the concurrent rise in prevention as MTCT-based and MSF clinic

treatment became available (Quarterly Aids Information Section Statistics, written communication, 2000-2002). It is important to note that provincial allocations to NGOs for HIV/AIDS and STD projects came only after the implementation of MTCT (Lawrence Bitalo, oral communication, July 9, 2002). An HIV/AIDS District Task Team was set up in mid-2000, bringing together provincial and local program officers.

The impact of MSF's involvement in MTCT and broader HIV/AIDS-related efforts, officially underway since September 1999, became clearer in 2000. The group brought resources that were not previously available in Khayelitsha. Training and public awareness programs increased, and with the successful establishment of the infectious diseases clinics in April 2000, the interest of academic institutions followed.

MSF made an additional impact through its coordination and cooperation with TAC. TAC was established in 1998 with a mandate to challenge the government, pharmaceutical industry, and insurance companies to address the HIV/AIDS crisis for those already infected, as well as to develop programs to destigmatize the disease and prevent additional infection. Since TAC's formal launch of Project Ulwazi† in 2000, programs focusing on sexuality and sexual behavior, condom use and HIV prevention, HIV education, awareness of patient's rights, openness in schools, and antidiscrimination policies among factory workers have all expanded. As a complement to ongoing education efforts, TAC launched a mobile exhibition regarding HIV/AIDS prevention and treatment in June 2002. Workshops were coordinated to coincide with the arrival of the mobile exhibition at scheduled locations. Nevertheless, there were signs of failure of condom use, such as a high and rising rate of STD and HIV infection, and an increased number of pregnancies. Project Ulwazi continues to try to address these issues through education. The challenge of effectively getting the message across to target populations (particularly young males) persists. One response was to establish a youth clinic at Site B in 2000 by the public health department.

CONCLUSION

The information gathered through these interviews included several striking examples of the constructive impact of the introduction of a treatment option on prevention programs in four general areas:

- *Stepping forward*: Until the introduction of MTCT programs, most of the education and awareness activities—exemplified by those at the National Association of People Living With AIDS (NAPWA)—were invitation-driven. Audiences were students and faculty in schools and universities, as well as members in a few churches; the majority of these attendees were not HIV positive themselves—the so-called worried well. With the introduction of MTCT, requests began to come from people who *were* infected, who wanted to understand more about the nature of their illness and their options, increasing demand for VCT, for educational materials, and for support groups (Anne Lebethe Mabena, personal communication, July 16, 2002; Dr. Ian Gillespie, oral communication, August 13, 2002).
- *The "ripple effect"*: Before the availability of nevirapine in July 2002, the staff at Elsie's River Day Hospital did not test for the HIV status of women who came for prenatal care, even those in labor. With the increased availability

†Ulwazi is the Xhosa word for knowledge.

of this ARV, an MTCT prevention program was introduced—and thus the incentive to both offer and consent to an HIV test increased. An obligation to provide pre- and post-test counseling was integral to the introduction of routine testing. Counselors who were hired to provide VCT to mothers-to-be also provided general HIV education to others entering the hospital and in the community. Mothers who learned of their HIV-positive status were referred to support centers such as the Red Cross, where they would also learn about any treatment possibilities available to them and their partner. In this way, a prevention program developed where it did not exist before, an effective consequence of treatment availability (Hugo Theron, Division of Child and Adolescent Psychiatry, Tygerberg Hospital, oral communication, July 23, 2002).

- *Education efforts energized*: The level of enthusiasm of the HIV/AIDS educators themselves increased significantly with the prospect of available treatment options. They no longer felt helpless in the face of a diagnosed illness in themselves or others, and they were more hopeful about the potential positive impact of their efforts. Many involved counselors noted that the introduction of ARV treatment has also changed the tone and content of support groups, and that, moreover, those on ARVs encouraged others to get tested and to seek treatment. This change is evidence of the significant and important impact of peer influence and impressions on behavior (Stephanie Kilroe, LifeLine, personal communication, August 5, 2002; Anne Lebethe Mabena, then at NAPWA, oral communication, July 16, 2002; Thembeka Zibi, then the AIDS Program Coordinator for Khayelitsha, oral communication, August 7, 2002).
- *Comparative assessment*: The Center for AIDS Development, Research and Evaluation (CADRE) and the South African Department of Health released a report in 2002 that compared Khayelitsha to eight other sites in South Africa. At the time of the study, it was the only district to have ARV treatment available in the public health service. Khayelitsha ranked highest in terms of condom use at last sexual intercourse, willingness to use a female condom, and HIV testing.[20]

A more general observation that is important to report, if difficult to quantify, is that of individual transformations observed and reported during this period of study. MTCT offered hope of preventing transmission to a child; in so doing, it also increased the desire of a mother—and father—to survive long enough to raise their child. ARVs represented the only hope of surviving over the long term. Members of the Khayelitsha community witnessed the extraordinary recovery of those few friends and neighbors who were provided with HAART: They were rising from presumed deathbeds, recuperating their health, interacting with those around them, even returning to employment. The assumption that HIV/AIDS was an inevitable death sentence began to change; in so doing, the importance of "knowing your status" became more evident. Rising numbers of HIV tests being requested, condoms being used, and attendance in support groups reflected increased awareness, education, and optimism about the future.

It is reassuring to find that, even as our research got underway, the notion of a public health approach integrating treatment into broader prevention initiatives has gained discernable momentum. Nevertheless, grudging acknowledgement has yet to be followed by proportional commitment of resources. As HAART is introduced into a number of resource-poor environments and the ability to sustain adherence to treatment regimens is demonstrated, this imbalance becomes increasingly unacceptable.

It is therefore essential to understand the dynamics through which the availability of treatment for an otherwise fatal disease may improve the efficacy of broadly defined prevention programs. The experience of Khayelitsha, South Africa, provides an informative case study. Lessons learned from the Khayelitsha experience may be able to help guide prevention and treatment programs within South Africa, and also throughout the developing world and in resource-poor areas of the developed world.

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