

**Document of
The World Bank**

FOR OFFICIAL USE ONLY

Report No. 24432

PROJECT PERFORMANCE ASSESSMENT REPORT

ZIMBABWE

**SEXUALLY TRANSMITTED INFECTIONS PREVENTION
AND CARE PROJECT
(CREDIT 2516)**

June 21, 2002

*Sector and Thematic Evaluation Group
Operations Evaluation Department*

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

Currency Equivalents (annual averages)

Currency Unit = Zimbabwe Dollar

Z\$1 = US\$0.018

US\$ 1 = Z\$55

Abbreviations and Acronyms

AIDS	Acquired immune deficiency syndrome
ARV	Antiretroviral drugs
CAS	Country Assistance Strategy
DfID	Department for International Development (U.K., formerly ODA)
DHS	Demographic and Health Survey
DOTS	Directly Observed Treatment Short-course
ERR	Economic rate of return
GMS	Government Medical Stores
GOZ	Government of Zimbabwe
HIV	Human Immunodeficiency Virus
ICB	International competitive bidding
ICR	Implementation Completion Report
IDI	Institutional development impact
ODA	Overseas Development Agency (now DfID)
MAP	Multi-country AIDS Project
MOHCW	Ministry of Health and Child Welfare
NAC	National AIDS Council
NACP	National AIDS Control Program
NATF	National AIDS Trust Fund
PMU	Project Management Unit
PPAR	Project Performance Assessment Report
SAR	Staff Appraisal Report
STI	Sexually transmitted infection(s)
VCT	Voluntary counseling and testing
WHO	World Health Organization
ZAPSO	Zimbabwe AIDS Prevention and Support Organization

Fiscal Year

January 1—December 31

Director-General, Operations Evaluation	:	Mr. Robert Picciotto
Director, Operations Evaluation Department	:	Mr. Gregory K. Ingram
Manager, Sector and Thematic Evaluation	:	Mr. Alain Barbu
Task Manager	:	Mr. Timothy Johnston

The World Bank
Washington, D.C. 20433
U.S.A.

Office of the Director-General
Operations Evaluation

June 21, 2002

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

**SUBJECT: Project Performance Assessment Report on Zimbabwe
Sexually Transmitted Infections Project (Credit 2516)**

Attached is the Project Performance Assessment Report prepared by the Operations Evaluation Department (OED) on the Zimbabwe Sexually Transmitted Infections (STI) Project. It was an US\$87.3 million project at appraisal, with an IDA credit of US\$64.5 million. It was the Bank's first stand-alone project in Zimbabwe with the objective of reducing transmission of STIs and HIV/AIDS, and one of the first in Africa. The project became effective in September 1993 and closed in December 2000, following a two-year extension, with US\$900,000 of the original credit canceled.

The rationale for the project was to slow the rate of HIV transmission by improving the prevention of STIs (including HIV) and treatment of curable STIs. The project sought to reduce the incidence and impact of STIs in a cost-effective manner, by providing critical commodity support (pharmaceuticals, equipment, and medical supplies) to government's integrated program for STI prevention and care. Project components included: enabling implementation of the National Sexually Transmitted Diseases Prevention and Control Program; enhancing government capacity to identify and treat the STIs that facilitate HIV transmission; treatment of opportunistic infections, including TB; supporting free distribution of condoms for disease prevention; HIV testing and counseling; ensuring the continued safety of the blood supply; and protection of health care givers in health facilities and home-based care. The project primarily financed essential drugs and medical supplies—in short supply due to foreign exchange shortages and fiscal constraints—to complement program support provided by donors and the government. Some components, including staff training, condoms, and voluntary counseling and testing, were financed by donor funds rather than the credit.

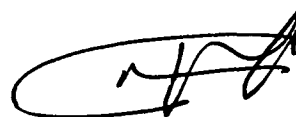
The project achieved most, but not all, of its explicit objectives. Despite some bottlenecks in the procurement and distribution system, the project contributed to increasing the availability of STI treatment and other medical supplies, and to improving the quality of STI care. The prevalence of treatable STIs declined during the life of the project, but the prevalence of HIV infection continued to increase. Zimbabwe now has among the worst HIV epidemics in the world, with an estimated 25 percent of adults infected in 1999. Evidence is inadequate to assess whether prevalence of STIs or HIV would have been worse in the absence of the project. But progress in improving STI treatment may have been offset by slow progress in behavior change and by the high prevalence of genital herpes, which is strongly associated with HIV transmission but is not curable. Thus the impact on HIV transmission was modest at best. Outcome is rated **moderately**

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

satisfactory, based on the achievement of the project's explicit objectives. Sustainability is **unlikely**. Drug availability has fallen since the end of the project, exacerbated by severe economic crisis. Institutional development is rated **modest**. Bank and borrower performance are both rated **unsatisfactory**. Although the project contributed to improved STI treatment, the difficulties encountered during implementation—including drug procurement, registration, and distribution; project coordination; and financial management—could have been better anticipated and addressed by both the Bank and borrower. Moreover, the government's poor management of the economy significantly undermined the project's prospects for sustainability.

The project illustrates that strengthening national STI programs—through procurement of drugs and improved provider training—can help reduce the incidence of treatable STIs. But the impact on HIV transmission depends on the epidemiological context (including prevalence of different STIs) as well as the quality, coverage, and targeting of STI treatment programs. Project experience also highlights the importance of continually assessing the evidence regarding the factors driving HIV incidence, and seeking to direct project and program resources to the interventions with the highest potential impact—such as promoting behavior change among youth and high-risk groups. In addition, lending for drug procurement may contribute to improved drug availability during the life of the project, but is not a sustainable solution. Finally, although the STI project was prepared in less than nine months as an “emergency” response to the HIV/AIDS epidemic, the Bank might have better anticipated capacity constraints to implementation and the limited political commitment to addressing AIDS.

Attachment

A handwritten signature in black ink, consisting of a large, stylized 'A' followed by a series of loops and a final vertical stroke.

OED Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. Assessments are conducted one to seven years after a project has closed. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are incorporated into the document that is sent to the Bank's Board. When an assessment report is released to the Board, it is also widely distributed within the Bank and to concerned authorities in member countries.

About the OED Rating System

The time-tested evaluation methods used by OED are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. OED evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (more information is available on the OED website: <http://worldbank.org/oed/eta-mainpage.html>).

Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Contents

PRINCIPAL RATINGS	V
KEY STAFF RESPONSIBLE.....	V
PREFACE.....	VII
SUMMARY AND OUTCOME.....	1
BACKGROUND	2
PROJECT DESIGN AND IMPLEMENTATION.....	4
PROJECT OUTCOME BY COMPONENT.....	6
MAJOR FINDINGS AND LESSONS	11
BIBLIOGRAPHY	13
ANNEX A. BASIC DATA	17
ANNEX B: WHAT IS THE LINK BETWEEN STIS AND HIV TRANSMISSION?.....	19

This report was prepared by Zahia Khann, consultant, who assessed the project in May 2001, and by Timothy Johnston, Task Manager. William B. Hurlbut edited the report. Pilar Barquero provided administrative support.

Principal Ratings

	<i>ICR*</i>	<i>ES*</i>	<i>PPAR</i>
Outcome	Satisfactory	Moderately Satisfactory	Moderately Satisfactory
Sustainability	Unlikely	Unlikely	Unlikely
Institutional Development	Substantial	Modest	Modest
Borrower Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory
Bank Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The Evaluation Summary (ES) is an intermediate OED product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

<i>Project</i>	<i>Task Manager/Leader</i>	<i>Division Chief/ Sector Director</i>	<i>Country Director</i>
Appraisal	Joy de Beyer	Roger Grawe	Steve Denning
Completion	Philip R. Gowers	Dzingai Mutumbuka	Yaw Ansu

Preface

This is a Project Performance Assessment Report (PPAR) for the Zimbabwe Sexually Transmitted Infections (STI) Project. The project was financed through an IDA credit of US\$64.5 million. The project became effective in September 1993 and closed in December 2000, following a two-year extension, with US\$900,000 of the original credit canceled.

This assessment report is based on information gathered during several Operations Evaluation Department missions to Zimbabwe. An OED mission visited Zimbabwe three times in 1997–98, as part of a country sector impact study of Bank support to the health sector (Johnston 1998). The STI project was not yet completed, but preliminary findings from project experience were incorporated into this review. In May 2001, a mission visited Zimbabwe as part of an OED Country Assistance Evaluation, and undertook a project performance review of the STI Project. The missions made field visits and interviewed government officials, Bank and donor field staff, academics, and nongovernmental organizations. Sources include the project's Implementation Completion Report (ICR), the Staff Appraisal Report (SAR), and project files—supplemented by other evaluation studies and the research literature on HIV and sexually transmitted infections.

Zahia Khann, consultant to OED, drafted the original report, which was subsequently revised by Timothy Johnston. The authors gratefully acknowledge all those who made time for interviews and provided documents and information, including officials at the Ministry of Health and Child Welfare, the National AIDS Control Program, the General Medical Stores, the Medicines Control Authority, the University of Zimbabwe, the Ministry of Finance, and current and former World Bank staff. The authors also gratefully acknowledge the support from staff in the Project Management Unit, who coordinated the missions and arranged interviews.

Following standard OED procedures, copies of the draft PPAR were sent to the relevant government officials and agencies for their review and comments but none were received.

SUMMARY AND OUTCOME

1. The rationale for the Zimbabwe Sexually Transmitted Infections (STI) project was to slow the rate of HIV transmission by improving the prevention of STIs (including HIV) and the treatment of curable STIs. The project sought to reduce the incidence and impact of STIs in a cost-effective manner, by providing critical programmatic and commodity support to the government's integrated program for STI prevention and care. It was an US\$87.3 million project at appraisal, with an IDA credit of US\$64.5 million. It was the Bank's first stand-alone STI/HIV project in Zimbabwe, and one of the first in Africa. The project became effective in September 1993 and closed in December 2000, following a two-year extension, with US\$900,000 of the original credit canceled. Project components were:

- i. Supporting implementation of the National Sexually Transmitted Diseases Prevention and Control Program;
- ii. Enhancing government capacity to identify and treat, in those most at risk, the STIs that facilitate HIV transmission;
- iii. Treating selected opportunistic infections associated with AIDS, especially those that are communicable and pose a general public health threat, such as TB;
- iv. Supporting an adequate supply of condoms for disease prevention;
- v. Providing gloves and other protective equipment for health care providers in facilities and home-based care;
- vi. Facilitating HIV testing and counseling; and
- vii. Ensuring the continued safety of the blood supply.

2. The credit primarily financed the purchase of essential drugs and medical supplies—in short supply due to foreign exchange shortages and fiscal constraints—to complement program support provided by other donors. The project's objectives remained unchanged, but several components were not financed by the credit due to availability of grant funds from bilateral donors—including condom supply (DfID) and HIV testing and counseling (USAID)—and the government financed blood supply equipment from its own resources. A parallel project financed by DfID financed training for health workers to improve clinical management of STIs, which complemented the drugs supplied by the IDA credit under component ii.

3. Outcome is rated **moderately satisfactory**. Despite some bottlenecks in the procurement and distribution system, the project contributed to increasing the availability of STI drugs and other medical supplies, and to improving the quality of STI care. The prevalence of bacterial STIs appears to have declined during the life of the project; it is plausible that the project contributed to this trend. The prevalence of HIV infection, however, continued to rise. Zimbabwe now has among the worst HIV epidemics in the world, with 25 percent of adults infected in 1999. Slow progress in changing sexual behavior and very high rates of genital herpes (which increases HIV transmission but is not cured by antibiotics) may explain in part why HIV continued to spread despite improvements in STI treatment. Sustainability is **unlikely**. Drug availability has fallen sharply since the end of the project, exacerbated by severe economic crisis, and the overall national framework for STI/HIV prevention remains inadequate. Institutional development is rated **modest**. Bank and borrower performance are both rated **unsatisfactory**. While many of the individuals and agencies involved in the project performed satisfactorily, problems encountered during implementation—including drug procurement, registration, and distribution, project coordination, and financial management—could have been better anticipated by both the Bank and borrower. Moreover, economic deterioration resulting from the government's management of the economy, and limited commitment of political leaders to combating HIV/AIDS, undermined the project's impact and sustainability.

BACKGROUND

4. During the 1980s, Zimbabwe made remarkable strides in implementing national family planning and primary health care programs. Infant mortality declined from 90 per thousand in 1980 to 53 per thousand in 1988 and other health and fertility indicators improved. Life expectancy was projected to rise to 65 years by 1998. Tragically, these health gains are now being reversed, primarily because of the spread of HIV/AIDS, but also exacerbated by steady economic deterioration since the early 1990s. As of 1993, one in ten adults aged 15 to 49 was infected with HIV. Since then HIV prevalence¹—the percent of adults currently living with asymptomatic HIV infection or AIDS—climbed to 25 percent in 1999 (UNAIDS 2000), and was estimated to have reached 34 percent by the end of 2000 (MOHCW 2001b)—one of the highest rates ever recorded on a national scale. Life expectancy at birth has declined to 39 years and is having a significant impact on Zimbabwean society; AIDS contributed to an estimated 160,000 deaths by 1999 (UNAIDS 2000). The reasons underlying the rapid increase in HIV infection and very high HIV prevalence rates in Zimbabwe are not entirely clear, but may include highly mobile populations, high prevalence of other STIs, low rate of male circumcision (90 percent of men are not circumcised), and slow progress in reducing behaviors that spread HIV, including among youth (NACP 1997; Caraël and Holmes 2001).

5. The human immunodeficiency virus (HIV) that causes AIDS is primarily a sexually transmitted disease in Sub-Saharan Africa and is largely preventable through the same precautions used to prevent other sexually-transmitted infections (STI)—condom use, reduction in the number of sexual partners, and abstinence. Treatment of those infected and their partners is also a major strategy for reducing transmission of STIs that are curable. By the early 1990s, however, a growing body of biomedical research suggested that the presence of other STIs facilitated the transmission of HIV (see Annex B). As a result, the World Health Organization (WHO) advocated STI treatment as a cost-effective strategy to prevent HIV transmission that should be incorporated into primary health care services and national HIV/AIDS control programs. In addition to the benefit of reducing transmission of HIV/AIDS, this strategy promised to reduce an important source of infertility as well as painful and chronic health problems. This was the context in which the Zimbabwe Sexually Transmitted Infections project was launched in 1993, the first of three World Bank projects in Eastern and Southern Africa that sought to reduce the scope for HIV infection through management of other STIs, in addition to other conventional methods for STI/HIV control.

6. Although STI treatment remains an important component of a comprehensive HIV prevention program, behavior change interventions—including reducing the number of sexual partners and increased condom use—are likely to have a higher impact on HIV incidence (Bernstein and others 1998; World Bank 1999). Moreover, subsequent research has suggested that the impact of STI treatment on HIV transmission may depend of a number of factors (see Annex B). These include epidemiological factors—including STI prevalence, the proportion of STIs that respond to treatment, the stage of the HIV epidemic, and sexual behavior patterns—as

1. HIV prevalence is the percentage of the adult population (typically adults 15-49) living with HIV infection (including asymptomatic HIV and AIDS) at a point in time. Because those infected with HIV remain infected until they die but may remain alive for a decade or more, HIV prevalence reflects the cumulative number of HIV infections from previous years, minus those who have died of AIDS and other causes. HIV incidence—the number of new infections per year—is a better measure of the spread of the HIV epidemic and the possible impact of prevention programs but is difficult to measure. Rises and declines in HIV prevalence are not necessarily indicative of a decline in new infections, since prevalence may continue to increase even if incidence is declining and death rates are still low (e.g., in the early stages of an epidemic). Further, in a mature epidemic, HIV prevalence may stabilize or even decline due to increased mortality as long as mortality exceeds the number of new infections, which could be rising, falling, or constant.

well as STI program attributes, including the quality and coverage of treatment, targeting of high risk groups, partner tracing, and the health seeking behavior of individuals with STIs (Fleming and Wasserheit 1999; Rottingen and others 2001).

7. In Zimbabwe, as in other Southern African countries, the overall incidence of STIs was relatively high at the time of project design. The Ministry of Health (MOH) reported over 820,000 new cases of STIs in 1994, representing over 7 percent of all new attendances (Latif and others 2000). In 1993, routine testing among women attending antenatal services found STI prevalence ranging from 3 percent for syphilis to as high as 12 percent for trichomoniasis. And an estimated half of STI patients were co-infected with HIV (UNAIDS 2000).

8. The government established the National AIDS Control Program (NACP) in the mid-1980s—located in the Ministry of Health and Child Welfare (MOHCW)—which appeared ready to take a leading role in the AIDS effort at the time of project design. Following project approval, however, it became more apparent that the NACP did not have the capacity or clout to mobilize a strong national response outside of the health sector. As a subunit of the MOH, it had little leverage over other sectoral ministries, and some of the key senior staff worked only part time—maintaining private medical practices. Thus, while project design was based on the assumption that behavioral change activities would receive adequate attention and funding—allowing the loan to focus on financing drugs for curative interventions—this turned out not to be the case. Moreover, the reluctance of senior political leaders to speak out on HIV/AIDS constrained Bank dialogue and efforts.²

9. Beginning in the late-1990s, the government began taking steps toward a more comprehensive approach to HIV/AIDS. But the actual implementation has been less encouraging. A 1999 National HIV/AIDS Policy was formulated under the MOHCW (GOZ 1999), and HIV/AIDS was listed as the number one priority in the National Health Strategy (MOHCW 1997). The government subsequently drafted a Strategic Framework for a National Response to HIV/AIDS (2000-2004), and established a multi-sectoral National AIDS Council (NAC) in 1999. Representatives of government and civil society were appointed to the NAC, which was to be supported by a small secretariat with professional staff. Shortly thereafter, the government enacted 3 percent “AIDS levy” on the formal sector, the proceeds from which were to go to the National AIDS Trust Fund (NATF), administered by the NAC. This tax was widely criticized in civil society, however, both for inadequate transparency in the use of the funds, and the increased tax burden despite continued inefficient spending elsewhere. As of mid-2001 the fund had disbursed Z\$160 million of its Z\$1 billion funds to various AIDS Service Organizations, such as Zimbabwe AIDS Prevention and Support Organization (ZAPSO) and People Living with AIDS. The government dissolved the NAC Board in March 2001, however, on the grounds that the Board was set up before the NAC Act became a law, rendering the Board devoid of legal powers.

10. Preparation for a planned Bank-sponsored multi-country AIDS project (MAP) was put on hold, due to Zimbabwe’s non-accrual status. (Establishment of the National AIDS Council was among the conditions for approval of this project.) Other donors are supporting limited programs, targeted primarily at NGOs and communities. If the current economic and political crisis were to be resolved, HIV/AIDS would be a top priority if the Bank were to resume lending.

2. The Bank’s 1993 and 1997 Country Assistance Strategy (CAS) discussed AIDS, but the STI project represented the Bank’s main project intervention for HIV during the 1990s. In the latter years of the project, the Bank’s country team also sought to raise HIV/AIDS as an issue in the macroeconomic dialogue—for example, incorporating into a 1999 structural adjustment loan HIV-related conditions

PROJECT DESIGN AND IMPLEMENTATION

11. The STI project was prepared rapidly (less than nine months), and sought to provide critical commodities to complement other donor programs. The project was intentionally kept simple to facilitate implementation. The government showed strong commitment to the STI program during project design, and previous experience with other Bank-financed projects suggested that capacity was sufficient for effective implementation.³ The government also appeared to be putting in place an effective institutional framework for HIV/STI control. The Department for International Development (DfID, formerly ODA) of the United Kingdom provided parallel financing to support health worker training in STI treatment, as well as general support for the national STI program.

12. The project was to be implemented by NACP, the Government Medical Stores (GMS) and the Project Management Unit (PMU) in the MOHCW, with NACP taking the lead in overall coordination. NACP was responsible for overall STI program coordination; MOHCW for the diagnosis and treatment of STDs and HIV-related infections; and GMS for the procurement and distribution of drugs, diagnostic equipment, and medical supplies. Zimbabwe National Family Planning Council—a semi-autonomous agency under the MOH—was to handle condom procurement and distribution. Government was to enhance GMS management capacity through staff hiring and training. The PMU was to assist the various implementing agencies with the tracking of process and program indicators.

13. In retrospect, the project design had several shortcomings. First, it did not adequately anticipate the need for training and technical assistance in Bank procurement procedures and financial management, or the strains that large drug procurements would place on the drug registration and distribution system. Second, the project design did not establish an effective coordination mechanism among the various implementing agencies. Thus, for example, estimates of projected drug needs were not always adequately communicated by MOH to GMS, which was responsible for procurement. Third, while seeking to finance portions of the national program—and depending on government and donor programs for complementary support—it did not adequately assess the risks to project outcomes if the anticipated support from donors did not materialize. Fourth, it established separate rules for the supply, purchase, and tracking of STI drugs—distinct from those for all other drugs; maintaining this parallel system proved burdensome for GMS and health facilities. Finally, in retrospect, it overestimated the degree of high-level political commitment to establishing an effective response to STIs and the HIV epidemic more generally. Other risks would have been difficult to anticipate at the time of project design, including the extent of economic deterioration (including 40 percent reductions of real wages for health workers and civil servants) or the departure of key staff in the PMU soon after project approval.

14. The project helped close a substantial drug financing gap, increase STI drug availability, and contributed to significant cost savings in drug purchases. From 1993 to 1998, the project financed half of the government's total drug budget—or a total of nearly US\$40 million over the life of the project. The national fiscal situation deteriorated further during this time, such that the drug availability would certainly have been worse without the project. The total cost of drugs was less than half of appraisal estimates, due to significant savings from international competitive

3. The STI Project also sought to complement the Second Family Health Project (Loan No. L3339), which was approved in 1991 and closed in 1998. It sought to: (i) improve maternal and child health and nutrition status; (ii) reduce the rate of population growth; and (iii) ensure that households in the 16 worst-served districts (40 percent of the population) would have access to basic HNP services (through strengthened inservice training for nurses and upgrading of district hospitals and rural health clinics). The project outcome was rated moderately satisfactory by OED.

bidding (ICB). For example, the contract for the first procurement was awarded for US\$2.1 million, compared to the original estimate of US\$5 million. The government had previously purchased all drugs on the local market, with significant markups. Following the first large procurement, the percentage of clinics and hospitals with complete stocks of essential STI drugs increased to 89 percent in 1995, up from 68 percent in 1993. But subsequent bottlenecks in procurement, drug registration, and distribution led to fluctuations in availability in health facilities (between 80 and 90 percent), despite the availability of adequate central financing.⁴

15. The parallel project sponsored by DfID trained providers in the syndromic approach to STI treatment, which meant that each project depended on the other for success. In the syndromic approach, health workers are trained to diagnose and treat STIs using standard protocols based on reported symptoms and physical examinations (without resort to laboratory diagnosis). Syndromic treatment is recommended when laboratory facilities are expensive or not widely available. A 1997 review of the ODA/DfID STI training component found that the training was contributing to improved treatment practices, but expressed concern about continued drug shortages (DfID 1997).

16. Of the total final costs (US\$87 million), the project spent 70 percent on drugs and diagnostics; 26 percent on medical equipment and supplies; about 4 percent for vehicles and maintenance (savings from drug procurement were used to purchase ambulances and vehicles for program supervision), and the remainder for office supplies and technical assistance.

17. Several factors contributed to fluctuations in drug availability. First, staff in the government's General Medical Stores did not receive sufficient training regarding Bank procurement procedures. For example, the second major bid was rejected by Bank procurement specialists; the ensuing delays during the rebidding process contributed to a decline in drug availability in 1996.⁵ Also, GMS was not aware that it could frontload procurement to ensure subsequent availability. Second, the process of registering drugs procured through ICB took over a year in a number of instances.⁶ Third, the MOH and the GMS had not developed a reliable system for estimating drug needs, which led to occasional stock-outs and sometimes in overstocking. Fourth, since drugs were credit financed, each procurement had to go through several additional approval stages, including the Ministry of Finance and a "no objection" from the Bank (Kaseke and Remedios 1997). Fifth, problems in drug stock management, supply logistics and delivery mechanisms created problems in distribution of drugs to peripheral health clinics. Finally, the demand for antibiotics, not just to treat STIs, grew with the AIDS epidemic,

4. Drug availability fluctuated as follows: 1993: 68 percent; 1995: 89 percent; 1996: 82 percent; 1997: 87 percent and 2000: 81 percent (ZEDAP various years). These data are based on visits to a national representative sample of hospitals and health clinics, and state the availability of the drugs at those facilities on the day of the visit by the survey team.

5. In this 1995 tender, GMS disqualified bidders that did not submit all the information necessary for drug registration. Bank procedures forbid government from contacting bidders regarding the prices, but GMS initially interpreted this to mean that they could not be contacted to request missing information. Once the bids were awarded, they were reviewed by Bank procurement specialists, who reversed a number of the awards saying that bidders had been inappropriately disqualified. Some of the originally disqualified bidders were later awarded contracts, and again submitted incomplete registration packages. Further delays accrued while requesting this information.

6. Unlike some African countries, Zimbabwe has a functioning Medicines Control Authority (MCA), which required that all drugs and suppliers go through a registration process. Bank procedures at the time required that bids be open to all companies and that the contracts be awarded to the lowest qualifying bidder, regardless of whether they were already registered. As the STI project became better known internationally, the number of unregistered companies winning contracts increased, and the MCA began to experience a backlog in drugs to be registered. Delays were compounded by the practice of sending all official requests for further information to suppliers by regular mail. The MCA subsequently augmented their staff and prioritized registration of STI drugs, shortening registration time. (The Bank's recently revised guidelines for procurement of pharmaceuticals permit prequalification.)

and overprescription of antibiotics by practitioners may also have contributed to depletion of drug stocks.

18. The Bank and government did not adequately anticipate these problems, but made progress in addressing them in the course of implementation. When stock-outs increased in 1996, Bank health staff and local procurement staff devoted more attention to facilitating procurement. GMS staff attended a Bank-sponsored procurement training workshop in 1996, and GMS subsequently adopted aspects of Bank ICB rules for the government's own procurements. This was a significant "spin-off" contribution of the project, which helped improve procurement efficiency of the government's own drug budget. In mid-1997, a seminar brought together for the first time representatives of all the departments and organizations—including the Bank—involved in drug procurement to discuss how the process can be made more efficient (Remedios and Kostermans 1997). A number of recommendations from the seminar were subsequently implemented. In the late 1990s, local health officials were permitted to purchase drugs directly from local private suppliers if they were unavailable through GMS. This helped improve drug availability, but reduced cost savings, since local prices were often six times the ICB price. Throughout the project, Bank staff also sought to use supervision missions as an opportunity for policy dialogue on the government's overall HIV/AIDS program.

19. Although the PMU was to be responsible for financial management, adequate systems for tracking project expenditures were not put in place. Inadequate coordination among NACP, GMS, and PMU resulted in near over-commitment of the credit in the final year of the project. With assistance from a regionally based Bank financial management specialist, the government was able to provide documentation for all project expenditures. Establishment of a strong financial management system, and regular involvement of a financial management specialist in supervision missions, might have prevented these problems.

20. With the end of the project, the increased burden from AIDS patients and deepening economic crisis has resulted in a drug financing gap and declines in STI drug availability. In 2001 there were significant increase in stock-outs throughout the country, with the lowest availability of STI drugs in rural and mission facilities (MOHCW 2001a). Subsequent to project completion, the government converted GMS into an autonomous pharmaceutical agency (NatPharm). Ensuring financial viability for this new agency will be a challenge, however, since the economic climate has made it difficult for government hospitals and districts to adequately finance their pharmaceutical requirements.

PROJECT OUTCOME BY COMPONENT

21. As discussed above, most of project financing was devoted to STI treatment, treatment of opportunistic infections, and provision of protective supplies. These components are thus given greater weight when judging overall project outcome. As summarized below, the STI treatment component substantially met its objectives, although with some shortcomings, as did the protective supplies components. The treatment of opportunistic infection component met only mixed success—particularly given the continued increase in tuberculosis incidence. Other donors or the government picked up several activities that were originally to be financed by the project. The outcome of these activities was mixed, and are described briefly below.

22. *STI treatment:* Available evidence suggests that drug availability and treatment practices improved as a result of the project and overall STI program. The NACP invested in training health personnel, funded by a parallel DfID project, which contributed to the integration of STI prevention and care into primary and reproductive health services. Compliance with STI case

management protocols (which reflect both provider training and drug availability) increased significantly—from 44 percent in 1994, to 63 percent in 1998, to over 75 percent in 2000 (Latif and others 2000). Observation of clinician-patient encounters also found that 85 percent of clinicians discussed the importance of condom use, and nearly 90 percent of discussed the importance of seeking treatment for sexual partner. Nearly two-thirds of patients were given condoms, although the use of condoms was demonstrated in just over a third of the observed encounters (Latif and others 2000). STI patients (particularly women) may continue to delay seeking treatment for STIs, however, and knowledge of the linkage between STIs and HIV transmission remains low among the rural population (Gregson and others 2001).

23. National data on STI incidence suggest a decline during the life of the project, but the data must be treated with caution. The total STIs reported to the MOHCW—which includes government and mission hospitals, but omits most data from private hospitals and clinics—declined from over 920,000 in 1995, to 796,000 in 1998. Moreover, the percentage of STIs among all new attendances in government health facilities declined from 7.6 percent in 1995 to 5.6 percent in 1998. The declines in reported STI cases in city of Harare clinics has been even more dramatic—from over 25,000 cases in 1990 to 12,000 in 1993 to 6,000 in 1998 (Latif and others 2000). Although the reduction in total reported cases in government hospitals could be due to more patients seeking treatment for STIs at private clinics rather than government facilities, anecdotal reports from private providers also suggest a decline in treatable STIs (Latif and others 2000).⁷ The trends and levels of STIs vary among cities, however. In Harare, the number of pregnant women testing positive for ever having syphilis was already low and declined further: from 2.1 percent in 1995 to 1.1 percent in 1999. In Bulawayo rates were higher, and the trend less clear: 6.7 percent of women tested positive for syphilis in 1995, compared to 7.8 percent in 1997 and 5.8 percent in 1999. The national sentinel surveillance survey carried out at the end of 2000 found that 5 percent of women attending antenatal clinics tested positive for syphilis—meaning that they had it at some point in their lives (MOHCW 2001a).

24. The project was national in scope, and did not specifically target STI interventions to high risk groups. It ensured drug supplies for STI clinics in urban centers, however, which served high risk populations, and some donor activities within the overall STI program targeted high risk groups. There are no reliable data on the quality and coverage of STI treatment for high-risk groups. But focus group discussions with commercial sex workers found that "stigmatization by health care providers was a major problem for sex workers." As a result, some reported reluctance to seek STI treatment or condom supplies in government health clinics (Latif and others 2000). Availability of STI treatment is also uneven in commercial estates, while risky sexual behavior is relatively common. In addition, youth have not been adequately targeted (Gregson and others 2001). Thus while some high risk groups were reached, a more explicit targeting strategy might have increased impact.

25. To the extent that STI incidence has declined, these trends cannot be fully attributed to improved STI. Behavior change—fewer partners and increased condom use—also could have contributed to reduction in STIs. But recent research studies and anecdotal evidence suggest that the case mix of STIs has also changed, with a relative decline in the STIs most susceptible to syndromic diagnosis and treatment (such as syphilis and gonorrhea). This suggests a contribution from STI treatment programs. Unfortunately, the prevalence of herpes simplex virus 2 (HSV-2),

7. In addition to changes in sexual behavior, Latif considers other possible reasons for the decrease, including: incomplete reporting; diversion of STI treatment seekers to private providers; over-reporting of cases nationwide, disincentives from user fees are proving. He concludes, however, that these factors are inadequate to explain the declines, particularly in Harare. The decline is more modest at the national level, however, which could be because the Harare was the first city to introduce syndromic case management for STIs (Latif 2000).

which cannot be cured by antibiotic treatment, is very high—with up to half of men and two-thirds of women infected, according to a survey in rural Manicaland (Gregson and others 2001). The same survey also found relatively high rates of trichomoniasis among women (14 percent, compared to only 1-3 percent for syphilis and gonorrhea). The high prevalence of genital herpes—which has been shown in Zimbabwe and elsewhere in Africa to be significantly associated with HIV transmission (Gregson and others 2001; Carael and Holmes 2001)—may have reduced the impact of STI treatment on HIV transmission. But since the project's stated objectives focused on reducing treatable STIs, the overall contribution of this component is judged to be substantial.

26. *Treating HIV-related infections.* This component financed (i) drugs and diagnostic equipment for the national tuberculosis control program, in coordination with Dutch bilateral support, and (ii) antibiotics for treating other opportunistic infections, including diarrhea, pneumonia, and yeast infections. The TB component was successful in ensuring an adequate supply of drugs for treating TB, which were rarely out of stock during the project. But reported cases of TB increased steadily from just over 9,000 in 1990 to over 45,000 in 1998—although this may partially reflect improvements in reporting (National Health Profile 1998). WHO estimates that TB incidence rates reached 562 per 100,000 in 1999, the highest among the 23 high-burden countries (WHO 2001). The cure rates and success rates for TB remain low by international standards—due mainly to inadequate compliance or discontinuation of treatment. The rate of cured TB cases is only 50 percent and the treatment success rate was only 70 percent in the 1998 cohort.⁸ Zimbabwe has been slow to roll out the Directly Observed Treatment Short-course (DOTS) approach to TB—in 1999, only 12 percent of the population was covered by DOTS (WHO 2001). The antibiotics procured under this components were reported to have been useful in treating HIV opportunistic infections as well as improving availability of treatment for other illnesses, such as child diarrhea and pneumonia.

27. *Protective supplies:* Project financing increased the availability of medical supplies such as gloves, syringes, disposable needles and bandages, which helped protect health care givers and may have helped reduce the anxiety of clinicians treating AIDS patients. The project spent nearly US\$22 million for medical supplies and equipment, more than triple the appraisal estimates of US\$6 million, reflecting high demand for the supplies. Contributions to facilitating home-based care were limited, however, beyond the provision of gloves and protective supplies. Data are lacking regarding the situation following project closure, but the shortages have likely increased.

28. Several other components were included among the original project objectives, but did not received direct financing through the IDA credit.

- *Condom provision:* DfID financed public procurement and distribution of condoms in parallel with the project, and USAID began supporting social marketing of condoms through private sector channels beginning in the late 1990s. The availability of condoms increased during the 1990s. Condom availability increased from 10 condoms per capita per year in 1992 to 13 per capita in 1999 (calculated at the central level, as a percentage of total population aged 15–49 years). Condoms were rarely out of stock in government hospitals and clinics during the project. This component thus met its objective of improving the supply of condoms. Condom use has increased with non-regular partners

8. Cured cases are defined as initially smear-positive patients who had a negative sputum smear in the last month of treatment, and on at least one previous occasion (WHO 2001). WHO defines those successfully treated as the sum of cases who were cured and who completed treatment (expressed as a percentage of the number registered in the cohort). This low success rate is partly due to the high rates of death at 10 percent, most likely due to HIV/AIDS, and treatment interruption rate of 8 percent.

but remains low with a regular partner. In 1994, nearly 40 percent of men reported using condoms with non-spousal partners, compared to 70 percent of men said that they used condoms with non-cohabitating partners in 1999. Only 4 percent of sexually active women report using condoms with their regular partners, however (DHS 1999). Thus, while there has been some reduction in high-risk behavior, risky behavior remains widespread, including among youth (FHI 1999).⁹

- *HIV testing centers.* The voluntary testing and counseling programs (financed by USAID) helped establish several VCT centers in major urban areas. But a significant gap still exists between people who would like to be tested and those who are tested. In 1999, out of nearly 60 percent of women who would have liked to be tested for the AIDS virus, only 11 percent had been tested. Nearly 63 percent of women not tested said they do not know of a source for HIV testing (DHS 1999). Thus, although not financed by the project, progress has only been modest.
- *Blood safety.* The objective of ensuring safety of blood supply was achieved, even though it was not supported by the credit. The National Blood Transfusion Service tested 100 percent of blood samples for HIV. The project was originally expected to finance equipment to help ensure the continued safety of the blood supply. But the government preferred to procure this equipment through single-source contracts, which were not permissible under IDA procurement regulations.

Relevance

29. Project design was consistent with the Bank's and GOZ's strategies, as well as the state of knowledge in the early 1990s regarding the role of STIs in HIV transmission. The project was expected to serve as just one component of a larger STI/HIV program, with the Bank serving as "donor of last resort" to fill a financing gap for pharmaceuticals and medical supplies. In retrospect, however, the project design was too narrowly focused on STI treatment—which may have reduced its impact on both STIs and HIV. Since Bank and OED guideline call for judging relevance according to current standards, overall relevance is rated *modest*.

Efficacy

30. Efficacy rates the extent to which the objectives were achieved. In judging efficacy, the evaluation gives the greatest weight to the components that receive the majority of project financing: STI treatment, treatment of opportunistic infections, and provision of protective supplies. Despite some problems with drug procurement and distribution, the project increased the quality and availability of STI treatment. The impact on incidence of treatable STIs is less clear, but it is plausible that the project contributed to apparent declines. But the prevalence and incidence of non-treatable STIs—both genital herpes and HIV—remain high. The project also increased the supply of antibiotics for treating opportunistic infections, and helped ensure availability of drugs for TB treatment, but TB cure rates have been low. Procurement of medical supplies and laboratory equipment was partially successful in meeting demand, but progress in institutionalizing home-based care has been limited. Among components not receiving direct credit financing, the objectives of increasing condom availability and ensuring blood safety were

9. According to a 1999 behavior change survey, over 90 percent of commercial sex workers reported using condoms with one-time clients, but only 77 percent of the time with regular clients. Although the median age of sex for youth (19 years) is comparable to many African countries, half of male youth reported risky sex in the previous year—but two-thirds of male and female youth reported use of condoms at the most recent risky sex (FHI 1999).

largely met, while progress in voluntary testing and counseling has been only modest. Although reduction in HIV incidence was not an explicit objective, the project's contribution to this ultimate objective appears to have been at best modest. But in relation to the project's major stated objectives of improving treatment of STIs and related infections, efficacy is rated **substantial**.

Efficiency

31. Efficiency is rated **substantial**. In terms of cost savings, the project's efficiency was high. The drugs procured by the project through international competitive bidding (ICB) cost half the appraisal estimates. Despite initial difficulties, the project also contributed to the adoption of improved procurement practices for other government drug tenders. In terms of allocative efficiency (the use of project resources compared to alternate interventions) an increased emphasis on high-risk groups could have increased the impact on STI incidence.

Outcome

32. Overall outcome is rated **moderately satisfactory**, which reflects the sub-ratings of modest relevance, but with substantial efficiency and efficacy. This rating reflects progress toward the project's stated major objectives of improving STI treatment and opportunistic infections, and provision of protective medical supplies.

Sustainability

33. Sustainability is rated **unlikely**. Sustainability can be assessed from several perspectives. First, the external environment has negatively affected sustainability prospects. The Zimbabwe economy is in a free-fall, with high inflation, ballooning public sector deficits, and chronic shortages of foreign exchange and fuel. As of October 2000, the government entered into non-accrual status with the World Bank and IMF, preventing further lending. This negative external environment contributed to the drop in drug availability following the end of the project. Second, from a technical design perspective, the project's focus on procurement of drugs and commodities helped relieve budgetary and foreign exchange constraints during the life of the project. The cost savings achieved through the use of international competitive bidding could have contributed to improved sustainability had they been closely linked to systematic reforms in the pharmaceutical sector. Despite some progress in pharmaceutical sector reform, the negative economic environment represents a continued risk to sustaining reforms. Finally, while the government took various steps to establish a national framework for combating HIV/AIDS with multi-sectoral interventions, the epidemic received limited attention from political leaders.

Institutional Development Impact

34. Institutional development impact is rated **modest** (in contrast with the ICR rating of substantial). The project helped strengthen the procurement capacity of the General Medical Stores (GMS), which adopted some Bank procurement procedures. GMS was transformed into an autonomous pharmaceutical agency (NatPharm) following project closure, but the project made only modest contributions to this change, and the reform still face a number of risks. Dialogue during the project may have contributed to the government's decision to establish a National AIDS Council (NAC), but the political commitment to address HIV/AIDS remains inadequate.

Bank Performance

35. Staff performance in project design was mostly satisfactory, but a number of problems with project implementation could have been better anticipated. Similarly, during project supervision a number of potential problems were not adequately anticipated by Bank staff. These included the need for more training for GMS staff in procurement, delays in drug registration, and the shortcomings in financial management systems that emerged in the final years of the project. Procurement and financial management specialists should have been included in supervision missions, and increased attention given to train local staff in procurement procedures. The project team worked proactively to solve problems once they were identified, but received uneven support in resolving problems in procurement and financial management from central units. Staff also used supervision missions to engage the government in a wider dialogue regarding HIV/AIDS programs, but Bank management should have raised HIV/AIDS earlier and more forcefully in its country dialogue. Overall Bank performance is rated **unsatisfactory**.

Borrower Performance

36. Borrower performance is rated **unsatisfactory**. Borrower performance during project design was satisfactory. The performance of implementing agencies—including MOH and GMS—was generally satisfactory with respect to the project's specified objectives. Like the Bank, the implementing agencies might have better anticipated problems in procurement, drug registration, and financial management, but eventually made progress in addressing the various difficulties. The NACP and the PMU did not adequately fulfill their coordinating functions, however, and the performance of some central government agencies—particularly the Central Payment Office—was unsatisfactory. Moreover, weak economic performance and low political commitment to combating HIV/AIDS reduced project impact and prospects for sustainability.

MAJOR FINDINGS AND LESSONS

37. The STI project was the first stand-alone STI project in Africa, and was conceived at the time as just one part of a wider program. Project experience illustrates several findings and lessons.

38. **Lesson 1.** The experience of this project, together with the emerging research literature, suggests that *strengthening national programs for treatment of bacterial STIs has a role in an overall HIV prevention program—and as part of a basic package of primary health care services—but is unlikely to have a major impact on HIV incidence alone*. Efforts to decrease HIV incidence in Zimbabwe should give priority to changing sexual behavior, particularly among high-risk groups and young people. Stronger political leadership will be necessary to promote open discussion and mobilize public and private resources.

39. **Lesson 2.** *Rapid preparation in response to an “emergency”—without sufficient attention to capacity, political commitment, institutional constraints—is likely to contribute to implementation delays*. Greater attention to training counterparts in Bank procurement rules and to procurement and distribution logistics might have reduced delays.

40. **Lesson 3.** *The use of loan funds to procure drugs can help increase drug availability during the life of a project, but does not ensure sustainability after project completion*. Diagnosis of capacity for pharmaceutical procurement, registration, distribution are essential, as is planning for sustainability following project closure. Parallel support for provider training from DfID was

essential to improve the clinic efficacy of drug use. Thus project experience illustrates that financing is only one of many constraints to effective treatment.

41. **Lesson 4.** *The Bank should also avoid, when possible, establishing separate implementation and tracking arrangements for pharmaceuticals and commodities.* Many antibiotics for STI treatment have multiple uses; a clinician cannot ethically withhold treatment from a child sick with pneumonia in order to save that drug for a subsequent STI patient. Moreover, requiring a separate pricing and tracking system for STI drugs added an additional strain on local capacity.

Bibliography

- Bernstein, Robert, David Sokal, Steven Seitz, and others. 1998. "Simulating the Control of a Heterosexual HIV Epidemic in a Severely Affected East African City," *Interfaces*, 28: 3 May-June.
- Caraël, Michel, and King Holmes. 2001. "Dynamic of HIV epidemics in sub-Saharan Africa: Introduction," *AIDS*, Vol. 15, Supplement No. 4 (The Multicentre study of factors determining the different prevalences of HIV in sub-Saharan Africa).
- Central Statistical Office (CSO) and Macro International Inc. 2000. *Zimbabwe Demographic and Health Survey: 1999*. Harare, Zimbabwe and Calverton, MD.
- Central Statistical Office (CSO) and Macro International Inc. 1995. *Zimbabwe Demographic and Health Survey: 1994*. Harare, Zimbabwe and Calverton, MD.
- Department for International Development (DfID) of the United Kingdom. 1997. "Zimbabwe Sexual Health Project: Output to Purpose Review." Draft. Options Consultants Services Ltd. Harare.
- Family Health International (FHI). 1999. "Behavioral Surveillance Survey: Zimbabwe." Clinical Epidemiology Unit of the University of Zimbabwe and Family Health International, in collaboration with the National AIDS Control Programme. Harare and Rosslyn, VA.
- Fleming, D.T., and J.N. Wasserheit. 1999. "From Epidemiological Synergy to Public Health Policy and Practice: the Contribution of Other Sexually Transmitted Diseases to Sexual Transmission of HIV Infection," *Sexually Transmitted Infections*, 75: 3-17.
- Government of Zimbabwe (GOZ). 1999. *National HIV/AIDS Policy*. Harare.
- Gregson, Simon, Peter Mason, Geoff Garnett, and others. 2001. "A Rural HIV Epidemic in Zimbabwe? Findings from a Population-Based Survey," *International Journal of STD and AIDS*, Vol. 12: 189-196.
- Grosskurth, Heiner, Frank Mosha, James Todd, and others. 1995. "Impact of Improved Treatment of Sexually Transmitted Diseases on HIV Infection in Rural Tanzania: Randomized Controlled Trial," *The Lancet*, Vol. 346, August 26.
- Johnston, Timothy. 1998. *The Impact of World Bank support to the HNP sector in Zimbabwe*. Report No. 18141, World Bank Operations Evaluation Department. Washington, DC..
- Kaseke, C., and V. Remedios. 1997. "Report and Recommendations of a Workshop on Strengthening Public Sector Drugs Procurement." Ministry of Health and Child Welfare; Government Medical Stores; Zimbabwe Essential Drugs Action Program. Mimeo. Harare.
- Korenromp, Ellen. *Treatment of Sexually Transmitted Diseases As an HIV Prevention Strategy? Cofactor Magnitudes, Syndromic Management and a Reappraisal of the Mwanza and Rakai Trials*. Doctoral Dissertation, Erasmus University, Rotterdam, The Netherlands.

- Latif, Ahmed S., E. Marowa, L. Mbengeranwa., S. Siziya. 2000. *Evaluation of Integration of Prevention and Care of STDs into Primary Health and Reproductive Health Services in Zimbabwe*. Ministry of Health and Child Welfare, Harare
- Latif, Ahmed S. 1995. "A Report on a Study to Determine the Aetiology and Pattern of STD amongst Men and Women Presenting to Health Centres in Harare, Zimbabwe, and to Determine Risk Factors for Cervicitis among Symptomatic and Asymptomatic Women." Mimeo. Harare.
- Ministry of Health and Child Welfare (MOHCW). 2001a. "Public Sector Essential Drugs Survey 2001 Report," Department of Pharmacy Services, Ministry of Health and Child Welfare. Harare.
- . 2001b. "National Survey of HIV and Syphilis Prevalence Among Women Attending Antenatal Clinics in Zimbabwe, 2000." Department of Disease Prevention and Control, Ministry of Health and Child Welfare. Harare.
- . 1997. "National Health Strategy for Zimbabwe, 1997–2007." Ministry of Health and Child Welfare. Harare.
- . Annual. "Zimbabwe: National Health Profile." Ministry of Health and Child Welfare, Department of Epidemiology Disease Control, National Health Information and Surveillance Unit. Harare.
- National AIDS Coordination Programme (NACP). 1997. "HIV/AIDS in Zimbabwe: Background, Projections, Impact and Interventions." Ministry of Health and Child Welfare. Harare.
- Nicoll, Angus and others. 1999. "Correspondence—Preventing HIV-1: Lessons from Mwanza and Rakai," *The Lancet*, Vol. 252, May 1.
- Remedios, Valerie, and Kees Kostermans. 1997. "Public Procurement of Pharmaceuticals: Lessons from Zimbabwe" Washington D.C.: The World Bank. (Study available from the authors: e-mail_vremedios@ehg.dk and Kostermans@worldbank.org)
- Rottingen, John-Arne, D. William Cameron, and Geoffrey Garnett. 2001. "A Systematic Review of the Epidemiologic Interactions between Classic Sexually Transmitted Diseases and HIV: How Much Is Really Known?" *Sexually Transmitted Diseases*, Vol. 28, No. 10.
- Sikosana, P.L.N., R. Labode. 1998. Assessing the Quality of Management of Sexually Transmitted Diseases in Public Health Institutions in Zimbabwe. Ministry of Health and Child Welfare, Harare.
- Wawer, Maria, Nelson Sewankambo, David Serwadda, and others. 1999. "Control of Sexually Transmitted Diseases for AIDS Prevention in Uganda: A Randomized Community Trial," *The Lancet*, Vol. 353, February 13.
- World Bank. 1999. *Confronting AIDS: Public Priorities in a Global Epidemic*. Oxford University Press for the World Bank, Washington, DC.
- World Health Organization (WHO). 2001. *Global Tuberculosis Control*. Geneva.

Zimbabwe Essential Drugs Action Program (ZEDAP). 1996/1998/2000. "ZEDAP Survey."
Directorate of Pharmacy Services, Ministry of Health and Child Welfare. Harare.

Annex A. Basic Data

ZIMBABWE—SEXUALLY TRANSMITTED INFECTIONS PREVENTION AND CARE PROJECT (CREDIT 2516)

Key Project Data

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs (US\$)	87.3	87.3	100
Original Commitment (US\$)		64.5	
Cancellation (US\$)		0	
Date physical completion: December 31, 2000			

Project Dates

<i>Steps in project cycle</i>	<i>Original</i>	<i>Actual</i>
Approval		June 17, 1993
Signing		July 14, 1993
Effectiveness	October 12, 1993	September 14, 1993
Closing	December 31, 1998	December 31, 2000

Staff Inputs (staff weeks)

<i>Stage of project cycle</i>	<i>Actual/Latest Estimate</i>	
	<i>Weeks</i>	<i>US\$</i>
Identification/Preparation	20.0	BB = 49.7
	4.9	TF = 12.9
Appraisal/Negotiations	16.3	BB = 43.2
	3.6	TF = 5.8
Supervision	155.72	BB = 384.11
	19.9	TF = 33.7
ICR	0.1	TF = 0.3
Total	192.02	BB = 477.02
	28.5	TF = 52.7

Note: The Time Recording System (TRS) does not provide a distinction of staff week time between supervision and preparation of the ICR. Therefore, the category "Supervision" above includes both implementation supervision as well as the time and resources required to prepare this ICR.

Mission Data

<i>Stage of project cycle</i>	<i>Date (month/year)</i>	<i>No. of staff in field</i>	<i>Specializations represented</i>	<i>Performance ratings^b</i>	
				<i>Implement. Status</i>	<i>Develop. Objectives</i>
Identification/Preparation	10/92	4	2 health specialists, 2 economists		
Appraisal/Negotiation	2/93	6	2 economists, 1 disease control specialist, 1 pharmacist, 1 infectious diseases specialist, 1 procurement specialist		
Supervision	11/93	4	1 economist, 2 public health, 1 STI specialist	HS	HS
	6/94			HS	S
	11/94	3	1 public health, 1 economist, 1 AIDS specialist	HS	S
	5/95	3	1 public health, 1 economist, 1 AIDS specialist	S	S
	11/95	2	1 public health, 1 economist	S	S
	5/96	3	1 public health, 1 economist, 1 sr. technical health specialist	S	S
	11/96	3	1 public health, 1 economist, 1 sr. technical health specialist	S	S
	6/97	4	1 public health, 1 economist, 1 sr. technical health specialist, 1 OA	S	S
	11/97	3	1 public health, 1 sr. technical health specialist, 1 OA	S	S
	6/98	4	2 public health, 1 sr. technical health specialist, 1 OA	S	S
	12/98	4	1 public health, 1 sr. technical health specialist, 1 procurement, 1 OA	U	S
	4/99	2	1 FM, 1 OA	U	S
	9/99			U	S
	12/99			S	S
ICR	10/00	4	1 public health, 1 procurement, 1 disbursement, 1 OA	U	S

ANNEX B: WHAT IS THE LINK BETWEEN STIs AND HIV TRANSMISSION?

STIs encompass both bacterial infections, such as syphilis and gonorrhea, which can be cured with antibiotics, as well as viral infections, such as Herpes Simplex Virus 2 (HSV2) and HIV, which cannot be cured. STI transmission can be reduced through reduction of risky sexual behavior (abstinence, fewer sexual partners, and/or consistent condom use) and treatment of bacterial STIs that can be cured. STI treatment can be made more effective by tracing and treating sexual partners (to prevent re-infection) and is an entry point for voluntary testing and counseling, condom provision, and other behavior change interventions. Because laboratory testing is frequently unavailable in developing countries, particularly outside hospital settings, WHO advocated a syndromic approach to STI treatment, in which clinicians diagnose and treat symptomatic STIs using standard protocols based on symptoms.

At the time that the STI Project was being designed, there was considerable optimism regarding the potential impact of STI management, including treatment, on HIV/AIDS transmission. By the early 1990s, there was growing biomedical research suggesting that the presence of an STI increased the chance of transmitting HIV from an infected to an uninfected partner by up to 10 times if genital ulcers are present (Fleming and Wasserheit 1999). A randomized controlled trial in the Mwanza region of Tanzania, found that that syndromic treatment of patients with symptomatic STIs who reported to clinics reduced HIV incidence by about 40 percent (Grosskurth and others 1995).

More recent research, however, suggests that the impact of STI management on HIV transmission is highly dependent on the context – the prevailing STI and HIV infection levels, the types of STIs present, and the extent to which STI management reaches those most likely to transmit STIs to others (Fleming and Wasserheit 1999; Rottingen and others 2001). A subsequent randomized controlled trial in the Rakai district of Uganda found that mass treatment of the population with antibiotics for STIs—including those who had no infection, those with asymptomatic STIs and those with symptoms—had no impact on HIV incidence, although the incidence of treatable STIs did decline (Wawer and others 1999).

The seemingly conflicting results between the Mwanza and Rakai experiments have sparked debate about the impact of STI treatment on HIV transmission and the generalizability of the research results (see Nicoll and others 1999). Interpretation is complicated by differences in the study designs. Differences in baseline prevalence of ulcerative STIs, for which people are more likely to seek treatment, could account for some of the difference in outcomes, as they appear to have a greater impact on HIV transmission than nonulcerative STIs (Rottingen and others 2001). Non-curable STIs (particularly herpes simplex virus II) might have a greater role in HIV transmission than curable STIs such as syphilis or gonorrhea—possibly because they are ulcerative and are more prevalent (Carel and Holmes 2001). Others have suggested that STI treatment may be more effective at preventing HIV early in an AIDS epidemic or that the “cofactor” for transmission of HIV in the presence of a treatable STI may be less than previously thought (e.g., three-five times more likely, rather than more than 10 times) (Fleming and Wasserheit 1999; Korenromp 2001). Neither study was in an urban area nor did either target services to those most likely to transmit STIs and HIV to others (high risk groups), so in that sense both studies failed to demonstrate what impact, if any, targeted STI treatment on might have on HIV transmission.

Although there are no national data in Zimbabwe on the prevalence of specific STIs at the population level, a recent study in rural Manicaland suggests that while the current prevalence of bacterial STIs such as syphilis, gonorrhea, and chlamydia are relatively low (1-3 percent among both men and women in rural Manicaland), the prevalence of genital herpes (HSV-2) is very high. About half of the males (aged 17-54) tested positive for HSV-2, and two-thirds of the women tested positive. The prevalence of trichomoniasis was also relatively high among women (13 percent), although lower among men (4 percent). Reported STI symptoms (urethral discharge and genital ulcers) were significantly correlated with HIV infection, even after controlling for proxies of sexual behavior. These findings suggest that HSV-2 and possibly trichomoniasis may be important cofactors in transmission of HIV, but that syphilis, gonorrhea, and chlamydia currently play a relatively minor role (Gregson and others 2001). As discussed earlier, it is possible that improved STI treatment is partly responsible for the relatively low prevalence syphilis, gonorrhea, and chlamydia, but is difficult to know whether this reduction had much of an impact on HIV transmission, particularly given the high rates of HSV-2 and trichomoniasis.