



**REVIEW
OF THE
NATIONAL PROGRAM
TO
PREVENT MOTHER-TO-CHILD TRANSMISSION OF HIV/AIDS
IN
UKRAINE**

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ACRONYMS AND ABBREVIATIONS

AIHA	American International Health Alliance
ANC	Antenatal care
ARV	Antiretroviral
AZT	Zidovudine (Azidothymidine)
BCG	Bacillus of Calmette and Guerin (tuberculosis immunization)
CCM	Country coordinating mechanism
CIS	Commonwealth of Independent States
DFID	Department for International Development, United Kingdom
DNA	Deoxyribonucleic acid
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GTZ	German Technical Cooperation
HIV/AIDS	Human immunodeficiency virus/acquired immune deficiency syndrome
IEC	Information, education, and communication
IR	Intermediate Result
JICA	Japanese International Cooperation Agency
JSI	John Snow, Inc.
MCH	Maternal and child health
MOH	Ministry of Health
MTCT	Mother-to-child transmission
MSF	Médecins Sans Frontières (Doctors Without Borders)
NGO	Nongovernmental organization
Oblast	Provincial administrative unit
PATH	Program for Appropriate Technology in Health
PCR	Polymerase chain reaction (test to detect HIV directly)
PLWHA	Persons living with HIV/AIDS
PMTCT	Prevention of mother-to-child transmission
RH	Reproductive health
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
WHO	World Health Organization

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EXECUTIVE SUMMARY

CURRENT ACTIVITIES AND STRATEGIES

Ukraine is experiencing an HIV epidemic that is particularly affecting vulnerable groups, including injecting drug users. As the epidemic has spread, an increasing number of women have been infected, which in turn has led to an increasing number of children infected as a result of mother-to-child transmission (MTCT). In 2001, the Ukraine government introduced a strategy aimed at preventing MTCT by integrating prevention of mother-to-child transmission (PMTCT) activities into existing health services (MOH 2001). In 2003, a participatory review of this PMTCT program was conducted (Zhilka 2003; Malyuta 2003). In addition, the United States Agency for International Development (USAID) drafted a strategy for its support to HIV/AIDS activities in Ukraine from 2003 to 2008, which included PMTCT activities within the first of three Intermediate Results (IRs) (USAID 2003a). The main purpose of this current review is to provide advice to USAID on the kind of PMTCT activities and services that might be supported under that strategy.

KEY FINDINGS

- Although there is a national policy commitment to PMTCT, this is not always matched with the delivery of local services.
- PMTCT services are highly medical in nature, with limited opportunities for users/clients to influence the types and methods of service delivery.
- PMTCT activities are formally integrated within maternal and child health services. However, there is less evidence of integration with primary HIV prevention or reproductive health services.
- PMTCT service provision is not coordinated among different service providers.
- There are serious shortages of antiretroviral drugs and other essential commodities that undermine and threaten the ability to provide effective PMTCT services.
- There is extremely widespread stigma and discrimination towards persons living with HIV/AIDS (PLWHA) and members of vulnerable groups, even among health professionals.

PRIORITIES FOR ACTION

Priority areas for action match the key findings of the review.

- There is a need for support to delivery of local services in addition to ongoing support to national policy development.
- There is a need for services to be much more client focused. This could be achieved by targeted support to nongovernmental organizations (NGOs) and PLWHA to provide nonmedical interventions that are inclusive of all PLWHA and that are

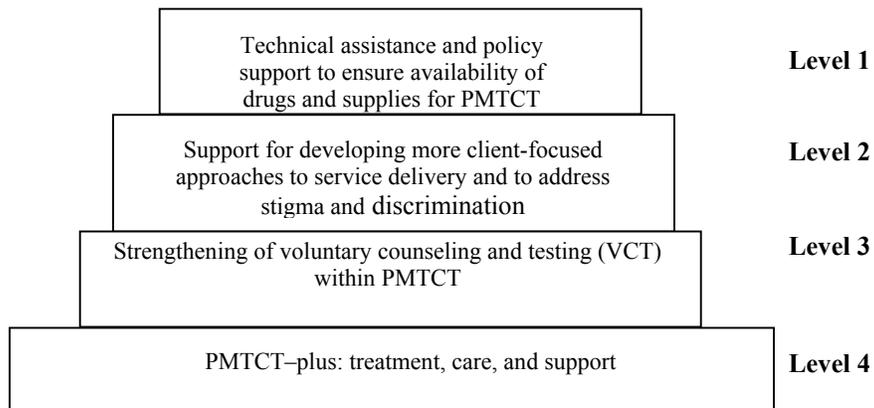
focused on vulnerable groups as well as those excluded from antenatal (ANC) services.

- PMTCT activities should have greater focus on and linkages with activities to prevent HIV infection as well as reproductive health services.
- Activities are needed to improve coordination of PMTCT activities both nationally and locally.
- Urgent action is needed to ensure a reliable and sustainable supply of antiretroviral drugs to ensure effective PMTCT services.
- All training of health staff should include a strong focus on tackling stigma and discrimination and promoting positive attitudes towards PLWHA and members of vulnerable groups, and not simply provision of professional/technical skills.

RECOMMENDATIONS FOR USAID ASSISTANCE

The level to which USAID can assist with Ukraine’s PMTCT activities will depend on the level of resources available. Four levels of priority are proposed.

Suggested Priority Levels for USAID Assistance to PMTCT in Ukraine



Level 1 focuses on providing technical assistance and support for policy development to ensure the availability of drugs and supplies for PMTCT. Priority items in this area would include antiretroviral drugs, HIV antibody test kits, and family planning supplies. Promotion of adoption of World Health Organization (WHO) standards could be a key focus of this approach. This is not a recommendation for USAID to provide PMTCT drugs, but rather to assist with the development of a sustainable system. A reliable, sustainable supply system is essential for prevention of mother-to-child transmission. Level 2 focuses on support for developing a more client-focused approach to services by targeting assistance to NGOs, including PLWHA support groups, in addition to addressing a way of tackling the key issue of stigma and discrimination. It is likely that levels 1 and 2 could be supported with current levels of resources.

Level 3 focuses on strengthening VCT services within the context of PMTCT. Level 4 relates to PMTCT-plus, that is, the provision of treatment, care, and support for HIV-positive women and children. Significant commitments to levels 3 and 4 could require additional resources.

I. INTRODUCTION AND BACKGROUND

INTRODUCTION

Ukraine is among the United States Agency for International Development's (USAID) priority HIV/AIDS countries, based on the escalating epidemic and its potential economic, political, and social impact. Vulnerable groups, including injecting drug users, are particularly affected. Other dimensions of the changing epidemic include the proportion of women infected, which has increased from 24 percent in 1996 to 40 percent in 2003, and the tripling of HIV-infected infants in the last five years (USAID 2004a). To assist the government of Ukraine in its efforts to address this situation, prevention of mother-to-child transmission (PMTCT) of HIV/AIDS is an objective of USAID's HIV/AIDS Strategy for 2003–2008 (USAID 2003b). This review was requested to help inform USAID on how best to develop its strategy to support the national PMTCT program.

BACKGROUND

The government of Ukraine has acknowledged that HIV/AIDS is a priority health issue and expressed its commitment to addressing this growing problem (Zhilka 2003: 5). The first cases of HIV were diagnosed in 1987; by 1995, the increase of HIV was described as an epidemic, with a rapid increase among injecting drug users and their sexual partners. As more women are being infected, there is a resulting increase among children. By early 2003, a total of 57,140 people, including 5,233 children, had been officially registered as HIV positive; 4,950 adults and 170 children were diagnosed with AIDS (Malyuta 2003:9). In 2004, national and international experts estimate that there are as many as 500,000 HIV-positive individuals (USAID/Ukraine 2004:2), contributing to Ukraine's status as having one of the highest HIV prevalences (estimated to be 1 percent or over) in Central and Eastern Europe.

In 2001, at a meeting organized by United Nations agencies (the World Health Organization [WHO], the United Nations Children's Fund [UNICEF], and the Joint United Nations Programme on HIV/AIDS [UNAIDS]) for the Central, Eastern Europe, and Central Asia region, the integration of measures to prevent mother-to-child transmission into maternal and child health services (MCH) was identified as a special need. By late 2002, a common PMTCT strategy was developed and promoted for the European region. This international strategy included the following (UNICEF 2002):

- integrating and positioning PMTCT within MCH services;
- linking health services with harm reduction and other local NGO efforts to reach injecting drug users and other women missed by services;
- broadening care and support interventions to address the protection of rights of HIV-positive women and children;
- using PMTCT to strengthen other public health efforts related to antenatal care and infant feeding; and
- ensuring political support for PMTCT interventions focusing on

- primary prevention of HIV–infected women;
- prevention of unintended pregnancies in HIV–positive women;
- reducing parental transmission during pregnancy, delivery, and immediately postpartum; and
- care and protection of HIV–positive mothers and their children.

As part of its HIV/AIDS Prevention Program, the Ukraine Ministry of Health (MOH) issued a decree (prikaz) in addition to legislation to support the implementation of PMTCT measures. Implementation of PMTCT began in 1999 (Zhilka 2003:7). The 2001–2003 Branch Program of MTCT Prevention in Ukraine was designed to improve the targeting of PMTCT activities and to more actively incorporate these into routine health care services as well as to promote cooperation between stakeholders on related issues. The goal of the program is to reduce the number of HIV–positive children born to HIV–positive mothers. The main objectives of Ukraine’s PMTCT program are as follows (Zhilka 2003:8-9):

- introduce methods of preventing HIV in newborns into health care practices,
- increase the accessibility and quality of medical care provided to HIV–positive pregnant women and newborns,
- develop national diagnosis and treatment standards for HIV–positive pregnant women and newborns,
- explore the issue of providing breast milk substitutes to newborns from HIV–positive mothers,
- provide health care services with antiretroviral (ARV) drugs for PMTCT as well as with individual means of protection for medical personnel against HIV infections,
- review the epidemiological situation with regard to HIV infection among pregnant women and MTCT,
- implement a monitoring program targeted at HIV–positive pregnant women and newborns,
- ensure systematic training and advanced training of specialists in accordance with up-to-date, evidence-based approaches to the problem of MTCT,
- ensure provision of information on PMTCT to the general public, and
- involve international agencies and nongovernmental organizations (NGOs) in the problem-solving process with respect to MTCT in Ukraine.

Several United Nations agencies, the World Bank, international donor organizations, and NGOs are providing assistance for HIV/AIDS, including support for the PMTCT program. The MOH identified UNICEF and Médecins Sans Frontières (MSF) as key supporters of the national

PMTCT program and, in fact, the antiretroviral drugs have been available primarily from donations from UNICEF, MSF, and pharmaceutical companies.

Earlier support from USAID was channeled through the American International Health Alliance (AIHA) in Odessa, in partnership with MSF, PATH, and the Odessa Regional Hospital. The Odessa program has been successful in developing internationally recognized MTCT clinical protocols adapted to health care settings with limited resources. Program reports indicate a 75 percent reduction in the rate of transmission of HIV from HIV-positive mothers to their infants, and from 24 percent in the baseline group (1997–99) to 6 percent (2002 to present) (USAID 2004:2). Reports from other geographic locations in Ukraine are less positive, suggesting a number of challenges to the full integration of PMTCT into MCH services. The POLICY Project, with support from USAID, is currently facilitating a number of studies and workshops for the MOH to develop a new PMTCT strategy for 2004 to 2008.

A participatory review of PMTCT was conducted by the MOH, WHO, and UNICEF in 2003 (Zhilka 2003; Malyuta 2003). The current review was requested by USAID to build on the earlier review by visiting oblasts not covered in 2003, in addition to supplementing the other ongoing efforts to identify problem areas. As noted above, the primary purpose of this review is to inform USAID's support for the national PMTCT program, help address the gaps, and implement a more comprehensive PMTCT program, including broader access to MCH and reproductive health services, particularly for vulnerable groups. The terms of the review are presented in the scope of work (see appendix A.)

II. METHODOLOGY

The review of the national PMTCT program was conducted by a team of three individuals, including two consultants (a medical doctor and a social scientist), and the HIV/STI infectious disease advisor (a medical doctor) from USAID/Washington, Bureau for Europe and Eurasia. An extremely capable and experienced translator and logistician assisted the team throughout the review.

The review was conducted from April 1–17, 2004 (the team was in Ukraine from April 3–17). The team reviewed literature relevant to HIV/AIDS and PMTCT in Ukraine, including documents and reports from the Ukraine MOH, USAID, The POLICY Project, NGOs, and United Nations agencies. (A list of the documents consulted is available in the last appendix of this review.) The team was briefed by USAID in an initial conference call with USAID/Washington and USAID/Ukraine and in-country meetings at the beginning and end of the review period. In Kiev, interviews were conducted with key stakeholders in the MOH, United Nations agencies (UNICEF, UNAIDS), the World Bank, WHO, and NGOs working on HIV/AIDS (The POLICY Project, MSF, PATH, John Snow, Inc., [JSI], International HIV/AIDS Alliance, and AIHA).

The review was designed to include visits to oblasts that had a high incidence of HIV/AIDS, represented a range of services, and had not been covered in earlier reviews of PMTCT. During the 7-day field travel to Donetsk and Makeevka in Donetsk, Simpheropol and Sevastopol in Crimea, Odessa, and Nikolaev, the team met with oblast and city health administrators, health care personnel in maternity hospitals, Women's Wellness Centers, and AIDS centers in each oblast. In addition to interviews, the team observed conditions and treatment of people living with HIV/AIDS (PLWHA) in the hospitals, clinics, and AIDS centers visited. Wherever possible, efforts were made to talk with PLWHA in the health facilities, and meetings were arranged with members of the PLWHA groups, in addition to attending a PLWHA support group. (A complete list of people consulted is given in appendix B; appendix C outlines the review team's itinerary.)

Although the team was able to collect the information needed for the review of PMTCT, there were some limitations. More clarity about the purpose, audience, and use of the review was needed earlier in the process. Unfortunately, the time for planning and conducting the review was short, which created some challenges and necessitated field travel during the Easter holiday. Health administrators, health care personnel, and PLWHA in Sevastopol and Odessa were extremely generous to meet with the team on the holidays, sacrificing their personal time. The tight schedule also made it difficult to add on activities and prevented observation of the MOH/POLICY Project workshop to plan the PMTCT Strategy for 2004–2008. The availability of a second translator would have facilitated access to users, making it possible for more informal discussions, especially with PLWHA.

III. KEY FINDINGS OF THE REVIEW

The key findings of the review are organized by the major components of the national PMTCT program.

PRIMARY PREVENTION AND PREVENTION OF UNWANTED PREGNANCIES

The 2001 Ministry of Health order on PMTCT contains provision for awareness raising in the areas of HIV prevention and prevention of unwanted pregnancy among HIV-positive women (MOH 2001). In addition, Ukraine's national PMTCT strategy includes primary prevention of HIV among women and prevention of unwanted pregnancies among HIV-positive women as two of four strategic approaches (Zhilka 2003). However, although there are activities focused on primary prevention of HIV among women and on preventing unwanted pregnancy among HIV-positive women, these do not appear to be generally seen as part of the efforts to prevent mother-to-child transmission of HIV. No respondent referred to these when asked about PMTCT activities, although they are mentioned briefly in a written report from Nikolaev Oblast (Nikolaev Oblast Health Administration 2004), and a previous review highlighted work in this area in Volin Oblast (Malyuta 2003). However, in oblasts visited in this review, PMTCT activities are largely seen as beginning with women who are already pregnant. This somewhat narrow focus of PMTCT is also reflected in regional WHO treatment and care protocols (WHO 2004).

There still appears to be a strong emphasis on provision of information as the primary means of preventing HIV infection. This is done through mass media (Zhilka 2003) and in schools, although some PLWHA interviewed reported that more could still be done in this area. Leaflets and posters are available to pregnant women in women's consultation centers. However, these are relatively few, highly text based, and largely biomedical in focus. Although it is reported that the use of fear-based messages is declining, some posters of this nature were observed in one polyclinic.

There is little evidence that voluntary counseling and testing is being used as a preventative strategy. Anecdotal reports indicate that many women are not even informed of negative results. Where they are informed, there seems to be little evidence of indepth, posttest counseling focused on avoiding HIV infection in the future (POLICY Project 2004, barrier 1).

The HIV epidemic in Ukraine particularly affects injecting drug users. Therefore, effective primary prevention methods should focus on their needs. Although there is some evidence of harm reduction programs for injecting drug users (e.g., in Donetsk), the extent of these programs is unclear. There do not appear to be drug substitution treatment programs available, although there are reports that these are planned. Antenatal and maternity services appear to incorporate little specific provision for injecting drug users. These services find it difficult to identify injecting drug users and are able to offer them only limited specific support (e.g., drug substitution therapy). Many health workers in these services have negative attitudes towards drug users, viewing them as the "lowest social layer" of society. As a result, many injecting drug users do not use antenatal services. Rather, they present to health services when they are already in labor. The need to establish links between PMTCT and harm reduction programs was pointed out in a recent review (Malyuta 2003).

This previous review highlighted ongoing work to prevent unintended pregnancies among HIV-positive women, for example, in Dnipropetrovsk (Malyuta 2003). In Ukraine, family planning services are reported to be available free of charge to HIV-positive women. However, widespread shortages of condoms and oral contraceptives in public facilities mean that HIV-positive women face difficulties in accessing contraceptives. This is particularly problematic for those HIV-positive women who are not officially registered. There are some reports that family planning supplies may be more available for immediate postpartum family planning (i.e., through maternity hospitals) than in other settings. However, a recent assessment of reproductive and maternal health in Ukraine (Seltzer 2003) concluded that “it is unlikely that modern method prevalence has improved since the 1999 Ukraine Reproductive Health Survey was conducted.” Key findings of this assessment were that the number of unintended pregnancies and therapeutic abortions remained high and that there were major gaps in and fragmentation of the public service delivery of family planning services. Although these problems are not specific to HIV-positive women, they also affect them.

This assessment (Seltzer 2003:19) also reports high rates of induced abortion, which may be underreported in official statistics. These show a steady decline in rates of induced abortion since 1990 (Zhilka 2003, figure 2). Regional guidelines stress that HIV-positive women should have informed choice about whether to continue their pregnancy or not and should not be forced to terminate pregnancy (WHO 2004). However, a recent survey of 40 HIV-positive pregnant women revealed that 18 had been strongly advised by doctors to terminate their pregnancy.^{1,2} (POLICY Project 2004; Yaremenko 2004). For example, one woman was told that “it is better to have an abortion because the child will be HIV positive” (Yaremenko 2004:29). The limited number of people interviewed as part of this current review indicated that HIV-positive women had been pressured/strongly advised to terminate pregnancies in the past but that this practice was now less common, partly as a result of the availability of antiretroviral drugs for PMTCT purposes. However, in 2002, only 1,262 of 2,022 pregnant HIV-positive women delivered (UNICEF, Project Achievements, no date). This implies that the 760 (i.e., 38 percent) are unaccounted for and could have been spontaneous or therapeutic abortions, or that some women could have delivered elsewhere (e.g., migrated).

VOLUNTARY COUNSELING AND TESTING

One central strategy to prevent mother-to-child transmission of HIV in Ukraine is to provide HIV tests to all women during their pregnancy. This is primarily done as part of antenatal care services offered through 558 women’s consultation centers nationwide (POLICY Project 2003b:4). All women are encouraged to attend free antenatal services monthly until 30 weeks and then every 2 weeks thereafter. Antenatal care services are said to be provided rarely in private health care settings (Zhilka 2003, section 4.3). Some women do not attend antenatal care services but present to maternity hospitals in labor. Nationally, this accounts for 15 percent of all pregnant women (Zhilka 2003, section 4.3), but this figure may vary widely in different regions of Ukraine. For example, the figure was said to be 4 percent in Sevastopol, 13 percent in

¹ The POLICY Project. *Operational Policy Barriers in the Area of PMTCT*. The POLICY Project, April 2004 (draft). This document (barrier 15) reports that 16 of 40 women had been “urged” by doctors to terminate their pregnancy.

² Yaremenko, O., Balakireva, O., Levtsun, O., Scherbinska, A., Kruglov, Y. and Leonchuk, N. *Access of HIV Positive Women to Quality Reproductive Health and Maternity Services*. The POLICY Project, April 2004 (draft). This document reports that 18 of 39 women had been strongly advised or forced by health professionals to terminate their pregnancy.

Makeevka, and up to 30 percent in other parts of Crimea. These women are tested for HIV using rapid/express tests.

Through this system, large numbers of women have been tested. In 2003, 392,020 were tested (POLICY Project 2003b:7; Zhilka 2003, section 4.3).³ This represents over 90 percent of all pregnant women.⁴ This percentage has grown from 32 percent in 1998 (Zhilka 2003, figure 3). It is unclear why up to 9 percent of women were not tested. It is possible that these represent women who opted not to be tested. However, this seems unlikely as both anecdotal evidence and the report of an earlier review (Zhilka 2003, section 4.3) indicate that the number of such women is extremely low. It is more likely that this number represents shortages of testing kits (e.g., rapid test kits) used for those presenting to health services in labor.

Essentially, the testing system currently in operation is of an opt out nature, that is, women will be tested unless they actively opt out of the process. Advantages of this approach are that it allows a large number of pregnant women to be tested and it is relatively streamlined in terms of staff time. However, there are major problems with this approach in the Ukrainian context. These include

- the failure to use negative results for prevention purposes,
- inadequate preparation for those women who ultimately test positive, and
- a lack of clarity over whether or not women can actually opt out of testing, and if so, how they do it.

This system of testing is widely referred to as voluntary counseling and testing (VCT). However, it has been suggested that this term should not be used in this context (POLICY Project 2004, barrier 1). The testing provided fails to meet many of the minimum standards required of true VCT services, as described briefly below.

Voluntary

The MOH's order on PMTCT is clear that HIV testing of pregnant women requires "voluntary consent" (MOH 2001). WHO regional guidelines also specify that such testing should be voluntary (WHO 2004). However, there are many examples of the ministry's order being interpreted as making HIV testing of women twice during pregnancy mandatory or required (Yaremenko 2004:16; Zhilka 2003, section 4.3). There is no clear system for ensuring that a woman is giving informed consent (POLICY Project 2004, barrier 18). In some cases, women are required to sign their consent to HIV testing in their medical records, but this practice is not universal. Even in such cases of signed consent, it is not clear that testing is truly voluntary. Reports from PLWHA confirmed that the process could be coercive. It was also stated by health care professionals that the doctors' responsibility is to convince women to be tested. In practice,

³ The POLICY Project. *Coverage of Essential HIV/AIDS Services, National Questionnaire*. July 2003, p. 7. It is unclear from these figures if the number of women counseled corresponds to the number of pregnant women/women who gave birth during that time period. It is also unclear if these figures relate to calendar year 2002 or 2003. The former seems most likely.

⁴ The official figure quoted is 91 percent (e.g., Zhilka 2003). However, this figure in the narrative does not correspond to the numbers provided in figure 3 ($392,020/409,199 = 96$ percent). Although there appears to be agreement on the numerator for the calculation, the figure for the denominator is less clear. For example, The POLICY Project, 2003 uses a denominator figure of 420,799 (i.e., 94 percent).

extremely strenuous efforts are made to ensure that all pregnant women are tested for HIV. This may even involve testing of umbilical cord blood where previous efforts to provide testing have failed (Zhilka 2003, section 4.3). Part of the motivation for this appears to be the protection of health staff that does not appear to adopt universal precautions for dealing with blood and other body fluids for all patients, but adopts special measures for patients known to be HIV positive.

Confidentiality

Widespread and systematic breaches of patient confidentiality were observed by the team. Some of these are briefly described below. These appear to be endemic within the broader Ukrainian health system (POLICY Project 2004, barrier 17) and make it extremely unlikely that confidential VCT services can be delivered within this system currently.

Service Provision

Services are often provided in environments in which confidentiality cannot be ensured. For example, the team observed male and female clients being counseled about sexually transmitted infections in the same room. There were reports of up to five clients being attended by doctors at the same time in one room. Client/patient sessions were frequently interrupted as part of the team's visit. While the team understands that this was done out of respect for the team, it did appear to indicate a failure to fully understand the need for client confidentiality.

Separation of Services

Many health facilities have separate services for HIV-positive people, including pregnant women. These include the AIDS centers and separate labor wards/delivery rooms in most maternity hospitals. Although this provision is always presented as being done in order to provide more appropriate and/or specialized services for HIV-positive people, this does not appear to be the case. At best, the focus seems to be on protecting health staff, and at worse, on isolating PLWHA from other members of society. In all cases, spaces for PLWHA were of a visibly lower standard than for HIV-negative people. In the case of one inpatient facility within an AIDS center, the space was severely overcrowded, lacking any form of privacy and housed within prison-like conditions, including locked doors and barred/bricked-up windows. People using facilities of this nature are likely to be identified as HIV positive and risk facing severe stigma and discrimination.

Disclosure of Diagnosis

Many HIV-positive people report their HIV status being disclosed by health staff to third parties, including relatives. Some HIV-positive people learned their status through a relative (Yarenmenko 2004:19). It is widely assumed that all health staff need to know if they are caring for an HIV-positive person as protection from infection. One senior health worker acknowledged that one of the main reasons HIV-positive women were kept in separate facilities was that other women would not stay with them because "everyone knows who they are."

Recordkeeping

Printed medical records appear to be routinely kept in open rooms in situations in which health staff would have almost unlimited access to them. Measures to prevent access by nonhealth staff appear inadequate. Records contain identifying information, such as name and address, although

in some cases, this is recorded on the inside pages. Diagnostic information is contained in these records, including indication of HIV status and test results. Where test results are negative, this is noted on the medical records. Where positive, a code is used (e.g., Z21). The meaning of this is said to be known only to health staff. In some facilities, diagnoses are indicated with colored labels (e.g., black stickers are used to denote AIDS).

Counseling

Pretest counseling is said to be provided by health staff at antenatal clinics (Zhilka 2003, section 4.3). However, anecdotal reports indicate that this counseling, when provided, largely consists of brief information giving, focusing on the reasons why HIV testing should take place. A study of 40 HIV-positive women revealed that 29 could recall receiving no pretest counseling (Yaremenko 2004:16).

Posttest counseling is largely focused on HIV-positive individuals (POLICY Project 2004, barrier 1). There is little clarity or consistency over the way in which positive results are communicated to women. Common practice appears to be that women are told that they need to go to the AIDS center, where they are told of their result by a physician and provided with posttest counseling (Zhilka 2003, section 4.3). This posttest counseling includes information about living healthy lifestyles and laws pertaining to HIV-positive people in Ukraine and not transmitting HIV to others, including PMTCT (Yaremenko 2004:22). HIV-positive people report that they were required to sign a document saying they understood their legal responsibilities in this area (Yaremenko 2004:19).

Testing

Testing is free to pregnant women and appears to be widely available. However, the system of testing is complex (Yaremenko 2004:19–20) and not completely clear. It appears that first tests of pregnant women are considered preliminary screening tests. If these are positive, a second verification test is performed. However, it is not always clear if this is done on the same sample or on a new one. Verification tests can only be conducted in certain laboratories, but it is unclear if these are a second immuno-ferment test or immune blot. It is not completely clear how much convergence there is between initial screening and verification tests. Anecdotal evidence (e.g., from Sevastopol) indicates that there may be wide divergence, with 15 percent of initial tests being reported positive and only 2 percent of verification tests. It is reported that there are concerns that the locally supplied test kits being used for initial screening do not meet international standards. In addition, there may also be long delays between a woman being tested and her receiving a definitive result (e.g., up to 2 months in Sevastopol).

Nationally, the number of pregnant women testing positive for HIV is said to be 0.5 percent (Zhilka 2003, section 4.3). In 2002, 2,022 women of 392,020 tested were found to be positive (POLICY Project 2003b:7). HIV-positive pregnant women are followed up in both antenatal clinics and AIDS centers (Zhilka 2003, section 4.3). In addition to referral to AIDS centers, there are reports that HIV-positive women may be referred to support groups of PLWHA (Yaremenko 2004:23).

PHARMACEUTICAL PREVENTION IN PREGNANT WOMEN AND THEIR NEWBORNS

The Ukraine government has expressed a strong commitment to decreasing mother-to-child transmission of HIV, despite the problems encountered in implementation of the PMTCT strategy. Similarly, the health administrators in the four areas visited (Donetsk, Crimea, Odessa, and Nikolaev) expressed commitment to ensuring that all HIV-positive pregnant women who present for antenatal care are offered and receive antiretroviral prophylaxis. As noted above, the Department of Maternal and Child Health, with participation from oblast health administrations and other organizations, is currently working to revise and improve the PMTCT strategy for 2004–2008.

Two regimens of pharmaceutical PMTCT are accepted and available in Ukraine (Zhilka 2003):

- Regimen I: a short-course regimen with zidovudine (AZT), which is prescribed starting from the 36th week of gestation (300 mg twice daily during 4 weeks before and up to delivery) and in labor (300 mg every 3 hours up to the time of child birth); and
- Regimen II: use of nevirapine starting from the onset of delivery or 4–12 hours before Cesarean section, in a single dose of 200 mg. Nevirapine syrup is administered to a newborn during the first 48–72 hours of life (Zhilka 2003).

Under Regimen I, it is not clear whether AZT prophylaxis is given to the infant postdelivery as is recommended by WHO guidelines (WHO 2004). In many of the health facilities visited, staff expressed a desire to start AZT earlier, between 28–32 weeks. WHO guidelines recommend starting AZT at 28 weeks of pregnancy.

Provision of antiretroviral (ARV) medications to Ukraine are from humanitarian supplies. In 2000 and 2001, Ukraine received zidovudine as humanitarian aid from UNICEF; in 2001, the Boehringer Ingelheim pharmaceutical company launched a five-year program of humanitarian donation of nevirapine to the country (Zhilka 2003).

The inconsistency in the availability of these ARVs was frequently expressed by doctors interviewed as a serious concern. This was especially true for AZT; in some facilities, health personnel admitted that the AZT supply was insufficient to prescribe a full course of drugs per Regimen I. Of equal concern was the revelation at one health facility that nevirapine syrup was not available and, therefore, newborns that required prophylaxis did not receive it.

Médicins Sans Frontières (MSF) is working in Odessa, Nikolaev, and Crimea, providing nevirapine for prophylaxis to mothers and their newborns. In these oblasts, the PMTCT strategy was reported to operate without interruption in supply or service. Unfortunately, MSF projects offer finite short-term support and the capacity for sustaining the high standard of service developed is questionable. In fact, the three-year project is ending and MSF support is already being phased out. For example, in Simferopol, since MSF handed over the project to the Crimea MOH, MSF has received requests from Crimea hospital staff to resume activities because of the slow, delayed, and inconsistent distribution of ARV drugs from the MOH.

Many oblasts, when implementing the PMTCT strategy, employ a very medical model of service delivery. There are only limited attempts to link provision of ARV drugs with psychosocial

support services, adherence counseling, and especially harm reduction services. These were secondary considerations, if considered at all.

A consistent and worrisome theme was the service offered to women from vulnerable groups, referred to as “women of the lowest social layer” or “unadapted women.” At all sites visited, in response to questions about the characteristics of the women who did not receive antenatal care, health personnel stated that these women were predominantly from vulnerable groups, including injecting drug users and sex workers. This was not surprising, however, as these women are socially excluded from services often because of negative attitudes of the staff and minimal outreach efforts to bring vulnerable groups into and keep these women in care. Women from vulnerable groups are therefore not receiving the maximum benefit from antiretroviral therapy to prevent MTCT of HIV.

DELIVERY MANAGEMENT

Delivery is one method of mother-to-child transmission of HIV. According to the U.S. Public Health Task Force Recommendations on PMTCT, Cesarean delivery performed before the onset of labor and the rupture of membranes is associated with a significant decrease in perinatal transmissions, with reductions ranging from 55 to 80 percent. Cesarean section needs to be balanced with the potential risks, including postoperative infections, risk of anesthesia, and other general surgical risks (Mofenson 2002).

WHO guidelines on delivery management in Commonwealth of Independent States (CIS) countries recommend that pregnant women receive counseling about delivery options. The possibility of Cesarean delivery at 38 weeks should be discussed and offered as an option (WHO 2004).

To reduce the level of postoperative infectious complications, taking into account high prevalence of infections among Ukrainian women and the high efficacy of PMTCT, national specialists carry out delivery “depending on the obstetrical situation.” According to monitoring data, the proportion of Cesarean sections of HIV-positive pregnant women is 12.4 percent (Zhilka 2003). This suggests that Cesarean sections are performed only when the clinical scenario requires this procedure. Based on discussions with women living with HIV who had children, the team learned that very little counseling on delivery options was offered. However, in Crimea, Cesarean section provision was more in line with WHO guidelines, as 45–50 percent of HIV-positive women were reported to have Cesarean deliveries. From these examples, it does not appear that there is a uniform protocol on delivery management for HIV-infected women and this is needed (POLICY Project 2004, barrier 9).

Birthing Facilities/Hospital Rooms

In general, HIV-positive pregnant women were hospitalized in special wards (boxes) that were separate from other pregnant women. Reasons given for this segregation were to protect HIV-positive women from potential infections and to keep them together as they share a common condition. Based on interviews and observation during the review, other factors also appeared to be influential, including health care personnel’s fear of infection and their widespread negative attitudes, stigma, and discrimination toward HIV-positive women.

Most of the separate rooms for HIV-positive women were similar to cells, often in a back section of the hospital; one facility even had a separate entrance. In many facilities, when

comparing regular maternity rooms with the separate facilities, it did not appear that efforts had been made to decorate these isolation areas to at least soften the depressing environment. Usually, there were multiple beds (three and more) in a room, and in several facilities, the birthing table was located in the same room. As a woman progressed through labor and delivery approached, it was reported that her roommates were asked to leave the room. After delivery, there was no rooming in, and mother and infant could be separated for days, although this practice was not unique to HIV-positive women. In one hospital, infants were transferred to a pediatric unit with isolated facilities located several miles from the maternity hospital.

INFANT FEEDING

The risks of transmitting HIV through breast milk are widely recognized, and it appears to be standard practice to counsel HIV-positive mothers not to breastfeed. This appears to be consistent with WHO guidelines for the region (WHO 2004). However, the extent to which mothers are followed up and supported in this process is unclear. In many cases, they appear to be simply instructed not to breastfeed. In one health facility, one reason given for isolating HIV-positive women after birth was that they would face questions/stigma if they were not breastfeeding and other women were.

The MOH's order on PMTCT states that one of the program's 10 objectives is to study questions about feeding babies born to HIV-positive mothers with infant formula. The order also states that formula will be supplied to primary health care institutions for such babies (MOH 2001). However, there is some evidence that this is not always the case (POLICY Project 2004, barrier 6). One of the reasons for this may be that although the provision of formula was included in the order, there is no provision for this in the state budget. Rather, it is to be paid for from local budgets. Consequently, it may be available in some localities and not in others.

HIV-positive women report that the subsidy provided to them after birth is currently very small and that the process is complex and bureaucratic for receiving it.

The role of milk kitchens in supporting HIV-positive women in feeding their infants is unclear. It was universally reported that these clinics no longer provide pooled human breast milk but cow's milk and formula only. Some other organizations (e.g., NGOs) have been providing formula in some areas. For example, MSF provided formula in three regions, including Crimea (MSF 2004).

NEWBORN SURVEILLANCE AND MANAGEMENT

HIV diagnostic testing to establish the HIV status of an infant born to an HIV-positive woman is an important component of a PMTCT strategy. According to WHO guidelines for CIS countries, this status can be established using the HIV DNA polymerase chain reaction (PCR) test performed within 48–72 hours of birth. If PCR is not available, an HIV antibody test at 15–18 months is recommended (WHO 2004).

According to the MOH, diagnosing HIV in children born to HIV-positive mothers is a problematic issue (Zhilka 2003:20). Because PCR is generally not available, the method used is antibody testing. In Ukraine, the practice is to screen the blood of HIV-exposed children younger than 18 months of age every 3 months (POLICY Project 2004), which is excessive and inefficient. In most cases, the mother's antibodies are still found in the infant's blood up to 15–18 months. Therefore, screening of infants before 15 months is inaccurate and not cost-effective.

Such frequent testing puts health care workers at unnecessary risk (e.g., increased needle stick injury), creates anxiety for the mother, and influences potential negative attitudes and behavior towards the child. One woman living with HIV/AIDS reported that her baby was tested 4 times with positive–negative–positive–negative results. This created tremendous anxiety for her, but fortunately, follow-up tests have been negative. A single test at 15–18 months could have saved her unnecessary stress and anxiety. Such experiences demonstrate the excessive focus on HIV diagnosis and that less attention is being given to other aspects of child health.

Caring for an infant can be very stressful, and dealing with the uncertainty of HIV status compounds this stress. The review found that at present, counseling or psychosocial support offered to women both predelivery and postdelivery is extremely limited in most areas. Given that HIV–exposed infants were described as being at high risk of being abandoned, programs and services designed to address these issues are needed and could result in more positive attitudes and treatment of infants.

Immunization

Follow-up care of newborns was also identified as an issue. The policy of not giving live vaccines to HIV–positive children was found to result in delays in administering some vaccines to exposed children and with undetermined status. This practice is inconsistent with WHO guidelines, which recommend that all HIV–exposed children should be fully immunized according to their age. Children of known status or with suspected infection should be given all appropriate vaccines according to the national schedule, including BCG (tuberculosis immunization) (WHO guidelines). However, HIV–positive children who are ill should not be given live vaccines. One woman informed us that the BCG vaccine was not given to her child until after 18 months, when HIV–negative status was established. This practice puts such children at particular risk of contracting tuberculosis. It is unclear whether other vaccines were also delayed.

This issue was identified as a problem (POLICY Project 2004, barrier 12) and the MOH–led PMTCT working group is currently reviewing the policies on immunizations and opportunistic infection prophylaxis in HIV–exposed children (POLICY Project 2004).

PMTCT–PLUS

In many resource-limited settings attempting to provide treatment, care, and support services, consideration is being given to expansion of PMTCT to include ARV drugs and psychosocial support to the mother (postnatal), her newborn infant, and if necessary, other family members. This is the PMTCT–plus model. PMTCT–plus is to be addressed in the new PMTCT strategy for 2004–2008.

However, currently in Ukraine where only a small number of people living with HIV/AIDS are receiving ARV therapy, PMTCT–plus is extremely limited. The number reported to be receiving ARV therapy from the MOH ranges from 137 to 150, including men, women, and children. This number does not include PLWHA receiving treatment from MSF and other NGOs, which at present is also limited. Therefore, although some women and children are receiving treatment, currently support is provided primarily from outside the public sector, and much more is needed.

In addition to the relatively low number of people living with HIV/AIDS receiving antiretroviral drugs for treatment, this review found that PMTCT services in Ukraine are highly medical. Psychosocial and community services are weak and very limited.

COORDINATION AND DELIVERY OF SERVICES

UNAIDS' principle of "the three ones" emphasizes the importance of a country having one national framework for HIV/AIDS work, one national coordinating body, and one national monitoring and evaluation system (UNAIDS 2004). Although Ukraine has a national HIV program (MOH 2003) and is finalizing a national monitoring and evaluation system, it is not always clear who is responsible for coordinating the country's response to HIV. Legally, the MOH has this responsibility and the power to issue the necessary orders on this topic. In addition, there are a number of multisectoral bodies, including the National AIDS Commission, the expanded United Nations theme group, the country coordinating mechanism (CCM) for the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) program, and a coordinating body for a World Bank loan. UNAIDS believes that agreeing to one national, multisectoral coordinating body for HIV/AIDS in Ukraine is a key priority, as is ensuring that this body has the necessary power and authority to issue relevant orders.

Donors supporting HIV/AIDS work in Ukraine include USAID, the European Union, the Department of International Development, United Kingdom (DFID), the Japanese International Cooperation Agency (JICA), and the World Bank, in addition to the recent WHO-supported Care and Treatment Knowledge Hub, also supported by the German Technical Cooperation (GTZ). There are extremely high expectations of Global Fund funding, particularly in the area of provision of ARV therapy for PLWHA. Several other international organizations and NGOs are providing assistance for HIV/AIDS (e.g., MSF, International HIV/AIDS Alliance, POLICY Project, PATH, and AIHA). UNICEF and MSF are among the organizations providing targeted financial assistance for the first phase of PMTCT.

Within the area of PMTCT, coordination is being ensured at the national level through a USAID-funded expert working group that is facilitated by The POLICY Project⁵ (POLICY Project and MOH 2004). This group is currently finalizing a national PMTCT strategy for 2004–08. There are reported to be PMTCT coordination councils at regional levels (Zhilka 2003), but the extent to which these are functioning is unclear.

A key principle guiding the provision of PMTCT services in Ukraine is that they are provided within the framework of the existing health services (Zhilka 2003), particularly those focused on maternal and child health. This means that those services are able to use existing infrastructure and human resources. However, a number of problems with coordination and delivery of these services have been identified (POLICY Project 2004, barrier 10). These include

- primary health care services, such as Women's Wellness Centers, being geographically separate from services for PLWHA, such as AIDS centers;
- distant location of AIDS centers in many places;

⁵ A workshop for this group was held during the time of this review. See MOH Ukraine/POLICY Project. "On Developing the Multisectoral Program: Strategy and Ways to Overcome MTCT for 2004–2008," Workshop Agenda, April 2004.

- difficulties in linking health services to social services for HIV–positive children and adults;
- the limited links between health facilities and support groups that can provide psychosocial and other support to PLWHA;
- HIV–positive women failing to use health services because of the fear that they will be misunderstood or face discrimination;
- lack of knowledge about HIV/AIDS among staff of MCH services;
- legal restrictions that prevent AIDS center staff providing services to women at Women’s Consultation Centers (POLICY Project 2004, barrier 10); and
- poor coordination of family planning services for HIV–positive women between AIDS and family planning centers (POLICY Project 2004, barrier 19).

Other weaknesses of the current system raised during this review included the

- lack of linkages between primary health care facilities and services for injecting drug users,
- absence of psychosocial support services within most health facilities, and
- lack of a client-focused approach to service delivery.

These weaknesses can lead to considerable problems from the perspective of PLWHA. These include

- being expected to wait for long periods in corridors without any seating,
- having to travel long distances (e.g., to AIDS centers to access services), and
- having to travel to different health facilities to receive medicines and see the relevant specialist.

Many conventional health facilities appear to be designed more for the well-being and convenience of the staff rather than clients/patients. There are a few examples of innovative approaches to service provision, such as the introduction of satellite clinics in Odessa. These clinics are structured around the medical and psychosocial needs of PLWHA and seek to provide a wide range of services within a positive and welcoming environment. PLWHA have identified a number of benefits of satellite clinics compared with AIDS centers. These include range and quality of services and reduction in stigma and discrimination (POLICY Project 2004, barrier 10). However, such services are relatively rare within Ukraine, and concern was expressed about potential challenges in the future.

A particular problem relates to services for women who currently do not access antenatal services but simply present to maternity hospitals in labor. Many of these women come from vulnerable groups, such as injecting drug users. One approach to preventing MTCT in such women is to offer them rapid HIV testing and nevirapine prophylaxis where appropriate. However, this approach does not provide them with other benefits of antenatal care. Another approach is to seek to educate women about the importance of antenatal care. However, this assumes that women do not attend because of lack of knowledge of services rather than for other reasons, such as distance, lack of money/time, perceived stigma, and discrimination experienced at health services.

There is evidence of a maturing NGO/PLWHA sector in Ukraine, although groups are in different stages of development. There are different levels of acceptance by the government of these groups but almost all have experienced conflict and suspicion. There are some examples of government PMTCT services cooperating with international NGOs, such as MSF, and local NGOs, such as in pilot projects in Donetsk (Zhilka 2003). However, such examples appear to be relatively few. A previous review of PMTCT activities concluded that there was “weak intersectoral collaboration” in this area and that there was a need for mechanisms to allow joint working between government and NGOs (Malyuta 2003:20–21).

MONITORING AND EVALUATION

There are two key quantitative indicators for monitoring PMTCT programs. Additional details of these indicators are presented in table 1, Quantitative Indicators for Monitoring PMTCT Programs, Indicator One, and table 2, Quantitative Indicators for Monitoring PMTCT Programs, Indicator Two (see appendix D). Both of these form part of the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) reporting requirements (UNAIDS 2002) and have been incorporated into the plans for a Ukrainian national monitoring and evaluation system for HIV/AIDS (Drew and Zablotska 2003:17). The current absence of a clear monitoring and evaluation system for HIV/AIDS in general and PMTCT in particular has been identified as a barrier to the effective prevention of mother-to-child transmission of HIV (POLICY Project 2004, barrier 11).

Regional WHO guidelines specify data that are recommended to be collected from Women’s Consultation Centers and maternity services (WHO 2004:91). A questionnaire administered in 2003 collected data on a number of these (POLICY Project 2003:7). However, it did not clearly state the total number of pregnant women for 2002 or the number of HIV–positive women who gave birth during that period. It also did not provide any disaggregated data for vulnerable groups. All these data should ideally be captured by the national system for monitoring PMTCT. It is clear that a great deal of PMTCT–relevant data are available in the Ukrainian health system. It is not always clear that the data are analyzed well and presented clearly.

In addition to the quantitative monitoring and evaluation, assessment of the quality of services is also required. Rather than seeking to establish and measure qualitative indicators for individual projects and programs, it would be preferable to develop national standards and protocols for key elements of PMTCT services (e.g., counseling and testing); ARV provision is important. Some of these have already been developed. Ensuring that such standards exist and then assessing performance against these could be an extremely effective way of monitoring and evaluating the quality of PMTCT activities.

As previously mentioned, PMTCT activities are highly biomedical. This is reflected in the approaches to monitoring that focus largely on services to individual patients and on reporting on activities upward to the Ministry of Health and external donors. There is little understanding of the important role that monitoring and evaluation can have in local accountability, for example, to clients and other stakeholders.

IV. CONCLUSIONS AND RECOMMENDATIONS

The provision of PMTCT services in Ukraine is based on a highly medical model with little understanding of more client-focused approaches. People living with HIV/AIDS and members of vulnerable groups experience high levels of stigma, discrimination, and disregard for their human rights.

KEY FINDINGS

- Although there is a national policy commitment to PMTCT, this is not always matched with the delivery of local services.
- PMTCT services are highly medical in nature, with limited opportunities for users/clients to influence the types and methods of service delivery.
- PMTCT activities are formally integrated within maternal and child health services. However, there is less evidence of integration with primary HIV prevention or reproductive health services.
- PMTCT service provision is not coordinated among different service providers.
- There are serious shortages of antiretroviral drugs and other essential commodities that undermine and threaten the ability to provide effective PMTCT services.
- There is extremely widespread stigma and discrimination towards PLWHA and members of vulnerable groups, even among health professionals.

RECOMMENDATIONS

The recommendations are based on the findings of the review. A summary of six priority recommendations are listed below, followed by recommendations specific to the components of the PMTCT strategy. The recommendations are for all stakeholders to consider.

Summary of Priority Recommendations

- There is a need for support to delivery of local services in addition to ongoing support to national policy development.
- There is a need for services to be much more client focused. This could be achieved by targeted support to NGOs and PLWHA to provide nonmedical interventions that are inclusive of all PLWHA and that are focused on vulnerable groups as well as those excluded from ANC services.
- PMTCT activities should have greater focus on and linkages with activities to prevent HIV infection as well as reproductive health services.
- Activities are needed to improve coordination of PMTCT activities both nationally and locally.

- Urgent action is needed to ensure a reliable and sustainable supply of antiretroviral drugs to ensure effective PMTCT services.
- All training of health staff should include a strong focus on tackling stigma and discrimination and promoting positive attitudes towards PLWHA and members of vulnerable groups, and not simply provision of professional/technical skills.

Primary Prevention and Prevention/Termination of Unwanted Pregnancies

1. PMTCT training and practice should stress the importance of primary prevention of HIV and prevention of unwanted pregnancies among HIV-positive women.
2. Greater use should be made of a wider range of prevention strategies, including condom provision and harm reduction services for vulnerable groups. NGOs, in general, and PLWHA support groups, in particular, are likely to be able to have key roles in carrying out such activities.
3. Information, education, and communication (IEC) activities should use materials that are more responsive to user needs. These are likely to be less biomedical in focus. Stigmatizing and fear-based messages should be avoided.
4. Greater emphasis should be placed on posttest counseling of HIV-negative women. This is a key prevention opportunity.
5. PMTCT services need to incorporate and link with services for specific vulnerable groups, such as harm reduction and drug substitution programs for injecting drug users.
6. A more consistent supply of condoms and other contraceptives needs to be ensured. One possible way of doing this may be to develop more formal links between counseling in the public sector and private provision of supplies.
7. Preservice and inservice training of health professionals should emphasize that HIV-positive women should not be pressured into termination of pregnancies. Counseling and education of women should present accurate information about the risks of MTCT of HIV.

Voluntary Counseling and Testing

1. The MOH should clarify whether or not HIV testing of pregnant women is voluntary and what this means in practice.
2. The MOH should produce clear guidelines on and provide training in HIV testing in pregnancy. This should include a standardized form for gaining informed consent for training.
3. Staff should adopt universal precautions for handling blood and other body fluids. Training and necessary protective equipment needs to be supplied.

4. All services for HIV–positive pregnant women should be delivered within mainstream maternity services. Separate facilities for these women are not required.
5. Radical changes are needed within Ukraine’s health system to ensure that basic standards of patients’ confidentiality are ensured. This will require major changes in the attitude of health staff, the way services are delivered, the way information is communicated, and the way records are kept.
6. Pretest and posttest counseling need strengthening to ensure that these are more than the giving of biomedical information. Posttest counseling should be provided to all women irrespective of HIV result.
7. Positive results need to be communicated to women in a more supportive and dignified way.
8. The system of HIV testing needs to be streamlined and simplified.

Pharmaceutical Prevention in Pregnant Women and Their Newborns

1. The MOH should develop drug procurement logistics and sustainable financing to ensure a consistent supply of antiretroviral medications.
2. Prophylaxis regimens should be consistent with WHO standards. In particular, this will mean starting zidovudine earlier in pregnancy and ensuring that there are sufficient supplies to do this.

Delivery Management

1. Training to affect fundamental changes in the attitudes of staff, as noted above, is also relevant to delivery management and other related components of PMTCT.
2. Reexamine the issue of Cesarean sections as a mode of delivery to bring it in line with WHO guidelines.
3. Incorporate delivery counseling as an integral part of standard antenatal care.
4. Hospitalize pregnant HIV–positive women in regular maternity wards and discontinue the practice of segregation.

Infant Feeding

1. The policy on infant feeding for HIV–positive women in Ukraine should be made clear.
2. Increased efforts are needed to support and follow up on women, particularly where they opt to feed their baby with an alternative to breast milk.
3. A clear and consistent system needs to be established and financed to assist HIV–positive women in obtaining access to infant formula, where appropriate.

Newborn Surveillance and Management

1. It is unlikely that PCR testing is economically viable under current circumstances in Ukraine; therefore, widespread introduction is not recommended. However, the economic feasibility of introducing PCR capabilities in the future should be pursued, including the development of protocols for use when PCR does become available.
2. Review guidelines for the testing and screening of HIV–exposed newborns using antibody tests. Bring this in accord with WHO guidelines.
3. Review *National Guidelines of Immunizations and Opportunistic Prophylaxis of HIV Exposed Infants*. Bring this in accord with WHO guidelines.
4. Expand social services for HIV–positive women to provide support and reduce the risk of abandoning their infants.

PMTCT–Plus

1. Efforts to expand PMTCT through the adoption of the PMTCT–plus model should be supported.
2. In particular, additional focus is needed on providing antiretroviral drugs for treatment of HIV infection in a sustainable way.
3. Develop and expand nonmedical services, including psychosocial support and adherence counseling.
4. Training for all health care professionals should incorporate a stronger focus on fundamental attitude change. Inviting people living with HIV to participate in training programs for health care professionals is one way to help accomplish this, in addition to adding a human face to the disease.
5. Ensure that services reach the most vulnerable women by expanding outreach services to specific vulnerable groups.

Coordination and Delivery of Services

1. Ukraine should consider merging all national coordinating bodies into one and giving that body the power to issue relevant orders.
2. The work of the national PMTCT working group should be encouraged. Further research is needed into the extent to which regional bodies are operational.
3. Increased efforts are needed to coordinate PMTCT services. This may be best achieved by seeking to understand how services are perceived by PLWHA and to make changes based on that understanding.
4. Services could be more accessible to HIV–positive women through establishing and operating a case management system, whereby a case manager is given responsibility

for a number of HIV-positive clients, with the view of coordinating and accessing services for these people.

5. The experience of satellite clinics should be studied further and this model should be used in other settings.
6. Mechanisms should be established to allow greater involvement of NGOs and PLWHA groups in PMTCT activities.
7. Outreach services through NGOs should be developed to reach women who currently fail to use antenatal services.

Monitoring and Evaluation

1. Ukraine should adopt a national HIV/AIDS monitoring and evaluation system as soon as possible.
2. This system should include, as is currently planned, the two UNGASS indicators on PMTCT.
3. It would be advisable to measure and publish figures for these indicators in the current format and that used by UNAIDS for UNGASS reporting.
4. Training should be provided to increase monitoring and evaluation analytical skills in general, and to ensure that those compiling and using data from these indicators understand fully the issues presented in tables 1 and 2, in particular.
5. National quality standards for all key elements of the PMTCT program need to be developed and monitored.
6. Assessment of quality of PMTCT services should seek the views and experiences of user groups.

APPENDICES

- A. SCOPE OF WORK**
- B. PERSONS CONTACTED**
- C. ITINERARY FOR THE REVIEW**
- D. QUANTITATIVE INDICATORS TABLES**
- E. REFERENCES**

APPENDIX A

**SCOPE OF WORK
(from USAID)**

Statement of Work for a Review of the National Program to Prevent Mother to Child Transmission of HIV/AIDS

USAID/Ukraine
19 March 2004

USAID/Ukraine is seeking assistance from POPTECH to undertake a review of the National Program to Prevent Mother-to-Child Transmission of HIV. In April 2003, UNICEF expressed interest in having PATH conduct a national review of Ukraine's progress towards integrating PMTCT programming into MCH services. This request complimented reviews of other components of the national PMTCT program by UNICEF and WHO, at the request of the Ukrainian Ministry of Health. Secondly, UNICEF requested that PATH also assess the main reasons why pregnant and/or HIV infected women do not attend antenatal care services and present only at the time of labor. Subsequent discussions with PATH revealed that PATH has been assisting with the implementation of components of the national PMTCT program and that PATH's participation may be viewed as a conflict of interest. For this reason, USAID/Ukraine is requesting POPTECH's support to conduct an independent review of selected elements of the national PMTCT program.



Background

In February 2001, the first WHO/UNICEF/UNAIDS meeting on the prevention of mother-to-child transmission of HIV in Central and Eastern Europe and Central Asia was convened in Minsk, Belarus. At this meeting, attended by representatives from nine countries from the region, the integration of mother-to-child transmission prevention (PMTCT) into maternal and child health (MCH) services was clearly identified as a special need. After a number of interim consultative meetings, the Directors of UNAIDS co-sponsoring agencies in the European region agreed to promote a common strategy on prevention of HIV infections in infants and young children and a draft strategy was developed in late 2002.¹

This international strategy places strong emphasis on the following²:

- integration and positioning of PMTCT within MCH services;
- linking health services with harm reduction and other local NGO efforts to reach IDUs and other women missed by services;
- broadening care and support interventions to address the protection of rights of HIV - infected women and children;
- using PMTCT to strengthen other public health efforts related to antenatal care, infant feeding, etc.;

¹ Malyavin, A. *UNICEF*. Introductory Note to the Draft Strategy For The Prevention Of HIV Infections In Infants In Europe. 16 April 2003.

² UNICEF Regional Office for CEE/CIS and Baltics. *A UNICEF Regional Strategy for the Prevention of Mother-to-Child Transmission in the CEE/CIS and Baltics: DRAFT for discussion*. Geneva, September 14, 2002.

- ensuring political support for PMTCT interventions focusing on:
 - Primary prevention of HIV infection in women;
 - Prevention of unintended pregnancies in HIV-positive women;
 - Reducing parental transmission during pregnancy, delivery, and immediately post-partum;
 - Care and protection of HIV-positive mothers and their children.

To date USAID support for PMTCT has been centered in Odessa with the implementation of a project through the American International Health Alliance (AIHA). AIHA in partnership with MSF, PATH, and the Odessa Regional Hospital has introduced internationally recognized “mother-to-child transmission” clinical protocols adapted to health care settings with limited resources. Early identification of HIV-positive pregnant women and the referral system has been redesigned to ensure proper 100 percent case management. Consecutive and interactive case management models have been implemented for primary prevention, prenatal, delivery and post-natal, as well as for infant care and monitoring, including follow-on care for families with HIV babies using a family practice model. Logistical support has been provided to establish a clinical training center at the Odessa Regional Hospital and to develop an electronic monitoring and evaluation database. The program’s impact is best illustrated by the 75 percent reduction in the rate of transmission of HIV from HIV positive mothers to their infants, from 24 percent in the baseline group (1997-1999) to 6 percent (2002 to present).

Status of PMTCT in Ukraine

Recent data suggest that the former Soviet Union (FSU) is now home to one of the fastest growing AIDS epidemics in the world and Ukraine is the only country in the Europe and Eurasia region with an estimated one percent prevalence among adults. National and international experts estimate that there are 500,000 HIV-positive people in Ukraine. Injecting drug users account for approximately 70 percent of infections, and the proportion of women being infected stands at about 40 percent; up from an estimated 24 percent in 1996. While absolute numbers are low, Ukraine also has seen a tripling of HIV-infected infants in the last five years. Antiretroviral treatment for PMTCT is generally available in Ukraine. In some regions, however, at least 30 percent of HIV-positive pregnant women are not being diagnosed until the time of delivery (based on the test results of the infant) and therefore miss an important opportunity to reduce the likelihood of vertical transmission through ARV treatment.

Considerable political will at the national level exists to address the burgeoning HIV/AIDS epidemic in Ukraine, and establishing a more comprehensive national PMTCT strategy is a priority for the government, making it a potential model for the region. The Ministry of Health has issued an order ("prikaz") and a legislative base already exists in support of implementing basic PMTCT measures. Most recently at the request of the MoH and with USAID support, The Futures Group through The POLICY Project has established a working group to focus on the further development of the PMTCT program and protocols. Further, in addition to the key UN agencies involved in HIV/AIDS, a number of international organizations are providing assistance in PMTCT. Most efforts are concentrated in the southern and eastern regions of the country where the epidemic first emerged. Information regarding the extent to which effective PMTCT interventions have been introduced elsewhere in the country is extremely scant.

Proposed Scope of Work for National Review

Drawing on international literature and experience, a three person team (two POPTECH, one AID/W) will focus on the effectiveness of PMTCT integration into MCH services. This review will emphasize key issues such as:

1. the status of primary prevention at the first level of contact (women's consultations), women's knowledge about HIV/AIDS prevention and PMTCT
2. current quality of VCT and informed consent in the context of MCH services as well as the feasibility and ramifications of implementing an "opt-out" approach to voluntary counseling and testing (VCT) as a standard approach;
3. implementation of current recommendations regarding ARV treatment for PMTCT
4. ability of MCH service providers to appropriately refer positive women and infants to care and support services (and the ability of HIV services to provide appropriate care);
5. strategies for reaching women not attending ANC care;
6. recommendations for enhancing perinatal surveillance;
7. any other immediately identifiable gaps in PMTCT programs, especially as they relate to MCH services.

Based on consultations with USAID, UNICEF and the Ministry of Health, the team will select two to four oblasts representative of different epidemiological trends within Ukraine in which to conduct the review.

The findings of this review will directly contribute both to the refinement of USAID/Ukraine's plans to address PMTCT, Ukraine's national PMTCT strategy, as well as to the formulation of national strategies in other countries in the region. To accomplish this scope of work, a team of professional with skills in MCH, HIV/AIDS, and PMTCT will be employed.

Team Composition

The Team shall consist of three international health experts including one USAID/Washington representative, as well as limited USAID/Kiev participation, and in-country counterpart participation. Team members shall be selected based on clinical, public health and social science backgrounds to provide a well-balanced understanding of the PMTCT situation in Ukraine. All team members will contribute to the writing of the report, however, the team leader will be responsible for the final deliverable report.

Level of Effort

It is estimated that the Level of Effort (LOE) for this assessment will be approximately as follows:

Background Reading	2 days
Travel Days	2 days
Field Work and Report Writing	13 days
Editing	8 days for Team Leader 2 day for Team Members
TOTAL LOE:	
Team Leader	25 person days
Other two Team Members	18 person days

Timeline

USAID/Ukraine anticipates that the entire review would be completed within a six week period. This would include preparation days, in-country work in Kyiv and the regions, and report writing and finalization. Ideally, the assessment would take place no later than April 2004.

Logistics

USAID/Ukraine shall arrange for a logistician/interpreter to work with POPTECH and the team in arranging all in-country travel and transportation (including airport pickup), lodging, assistance with providing key documents, scheduling meetings and appointments, and hiring additional interpreters when needed. Once in country, the team shall schedule additional meetings as appropriate. USAID/Ukraine shall be available to the team for consultations regarding sources and technical issues, before and during the assessment process.

Preparatory Materials

USAID/Ukraine will provide to POPTECH a list of background and other relevant materials to be duplicated and distributed to team members. The team members will be expected to review the materials prior to arrival in Ukraine and will be given preparation time prior to departure from the United States. The materials will include, but not be limited to:

- The USAID/Ukraine Mission's current strategies (CSP and HIV/AIDS strategy);
- Relevant prikazes addressing PMTCT;
- Recent PMTCT evaluation sponsored by UNICEF;
- Materials produced under the USAID funded AIHA program in Odessa;
- Draft national PMTCT program and protocols being developed by the Ministry of Health (with the POLICY Project's assistance), if available.

Meetings and Briefings

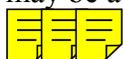
Orientation Meeting with Mission Staff: The first day of the team's visit will include meetings with Mission staff and other relevant personnel. Among other matters, the Statement of Work will be explained, discussed and amended as appropriate.

Debriefing to Mission staff An out-brief, including presentation of main findings and recommendations, will be presented.

Deliverables

The First Draft of the final report will be due at end of the team's visit. The length should not exceed 25 pages (not including appendices, lists of contacts, etc.). This draft will include findings and recommendations for Mission review.

Final Report: based on input and sections drafted by other team members, the team leader will prepare the final draft of the report for submission and processing to POPTECH who will, in turn, solicit further input from the Mission before issuing the final edited report. The mission would like 10 hard copies and an electronic version of the final report by 31 May 2004. This final report will be considered a public document and upon POTECH and USAID's discretion may be available both electronically and in printed form to all interested parties.



APPENDIX B

PERSONS CONTACTED

PERSONS CONTACTED

KIEV

USAID Mission for Ukraine, Belarus, and Moldova

Nancy Godfrey, Director, Office of Health and Social Transition

Tim A. Clary, Senior Technical and Policy Advisor, HIV/AIDS and Reproductive Health

Irina Gladun, Social Sector Program Assistant

Alina Yurova, Health Program Assistant

Ministry of Health, Ukraine

Raisa Moiseenko, Head, Maternal and Child Health Department

Nadia Zhylyka, Head, Obstetrics Service of Maternal and Child Health Department

Nadia Salo, Leading Specialist, Obstetrics Service of Maternal and Child Health Department

Médicins Sans Frontières (MSF)

Zahedul Mohammed Islam, Head of Mission

Zhanna Parkhomenko, Assistant Head of Mission

WORLD BANK Project, Control over HIV and TB Prevalence in Ukraine

Valeriy Khmarskiy, WHO and World Bank Project Manager on HIV/AIDS

WHO REGIONAL OFFICE FOR EUROPE

Igor Oliynyk, Coordinator, HIV/AIDS/STI Program in Ukraine

PATH

Katherina Gamazina, Senior Program Officer, Deputy Country Manager for Programs

John Snow, Inc. (JSI)

Helene Lefevre-Cholay, Chief of Party/Project Director

Alexander Golubov, Behavior Change Communication Advisor

POLICY Project

Andriy Huk, Program Operations Manager

Oleg Semeryk, Technical Advisor for Reproductive Health and HIV

Philippa Lawson, Senior HIV Specialist, Futures Group

Michelle Prosser, Certified Nurse-Midwife, Senior Reproductive Health Advisor

HIV Alliance

Irina Borushek, Manager of Care and Support Component

Andrey Klepikov, Project Manager

American International Health Alliance

Alyona Gerasimova, Regional Director, West Newly Independent States

Elena Voskresenskaya, Senior Program Coordinator

United Nations Children's Fund (UNICEF)

Tetyana Tarasova, Assistant Program Officer, HIV/AIDS

Joint United Nations Programme on HIV/AIDS (UNAIDS)

Arkadiusz Majszykm, Senior Advisor, Division for Europe and Americas, Country and Regional Support Department
Lidia Andrushchak, HIV/AIDS Program Coordinator

DONETSK

Oblast Health Administration

Lidia Blakitnaya, First Deputy Head, Oblast Health Administration

Donetsk Oblast AIDS Center

Nickolay Grazhdanov, Head Doctor, Head, Donetsk Oblast Society for HIV–Infected Assistance (NGO)

Olga Kosinova, Deputy Head Doctor, Prevention

Inna Koshkareva, Head, Outpatient Care Department

Valentina Pavlenko, International Projects Coordinator

Olga Kutovaya, Epidemiologist

PLWHA Network

Alexei Moroz, Representative of All-Ukrainian PLWHA Network

Svetlana Moroz, Regional Coordinator of All-Ukrainian PLWHA Network

Municipal Clinical Hospital #6

Gennadiy Nefedov, Head, City Health Administration

Olga Ostapenko, City Chief, Obstetrics/Gynecology

Eugeniy Mirovich, Deputy Head Doctor

Vladimir Astakhov, Professor

Lubov Venetsova, Head, Maternity Department

Lena Vasuta, Head, Women’s Consultation

MAKEEKVA

City Health Administration

Oktyabrina Ivanenko, Deputy Head, City Health Administration

Irina Gilkut, Head, Special Department of Health Protection, Chief, Obstetrics/Gynecology

City AIDS Center

Larisa Kibrik, Head Doctor

CRIMEA/SIMPHEROPOL

Ministry of Health, Autonomous Republic of Crimea

Galina Mikhaylova, Deputy Minister

Tatyana Velichko, Head, Department of Health Care Provision and Accreditation

Crimean AIDS Center

Tatyana Nepomnyashchaya, Head Doctor
Andrei Stelmah, Obstetrician/Gynecologist
Natalya Kiseleva, Pediatrician

Municipal Clinical Hospital #2

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Elena Braude, Head, Maternity Department

PLWHA Network

Slava Bazhenov, Representative, All-Ukrainian PLWHA Network
Natalya Egorova, Regional Coordinator, All-Ukrainian PLWHA Network

CRIMEA/SEVASTOPOL

Angelina Orekhova, Deputy Head, City Health Administration
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Natalya Arkadova, Epidemiologist, City AIDS Center

ODESSA**Oblast Clinical Hospital**

Natalya Nizova, Medical Adviser, Maternal and Child Health and HIV/AIDS, Consultant, AIHA
Svetlana Posokhova, Head, Oblast Maternity Hospital
Natalya Moiseeva, Pediatrician, Oblast AIDS Center
Natalya Leonchuk, Deputy Head, Coordinating Committee of All-Ukrainian PLWHA Network

NIKOLAEV**Oblast Health Administration**

Vladimir Shishkin, Head, Oblast Health Administration
Mikhail Arkhipov, Chief Obstetrician/Gynecologist, Oblast Health Administration

Nikolaev Oblast AIDS Center

Ludmila Buzovskaya, Deputy Head Doctor
Victor Kryzhanovskiy, Head Doctor

City Maternity Hospital #3

Victor Malyuk, Head, Obstetrics/Gynecology Professional Association
Svetlana Shkvarenko, Head, Women's Consultation
Vadim Yastremskiy, Head, Observation Department

Nikolaev Oblast Clinical Hospital

Svetlana Motsar, Head, Extragenital Pathologies

APPENDIX C

ITINERARY FOR THE REVIEW

ITINERARY FOR THE REVIEW

KIEV

April 3, 2004 Arrival of Judith Justice

April 4 Arrival of Stephen Lee in Kiev
Meeting with Tim Clary, USAID/Ukraine

April 5 Kiev

- Ministry of Health, MCH Department
- Médecins Sans Frontières (MSF)
- World Bank Project, Control over HIV and TB Prevalence in Ukraine
- WHO Regional Office for Europe
- PATH Project
- JSI Project

April 6 Kiev

- POLICY Project
- HIV Alliance International
- American International Health Alliance (AIHA)

Arrival of Roger Drew in Kiev

Depart by plane from Kiev to Donetsk

DONETSK

April 7 Donetsk

- Oblast Health Administration
- Donetsk Oblast AIDS Center
- Municipal Clinical Hospital #6

April 8 Makeevka

- City Health Administration
- City AIDS Center

Donetsk

- PLWHA Network

Depart by train from Donetsk to Simpheropol

Crimea/Simpheropol

April 9 Crimea/Simpheropol

- Crimean AIDS Center
- Municipal Maternity Hospital #2
- Ministry of Health of Autonomous Republic of Crimea

- April 10** Sevastopol
- Sevastopol Health Administration
 - Maternity Hospital
 - Anti-AIDS Center

 - Simpheropol PLWHA Network
 - Team meeting to plan report
- April 11** Simpheropol and Yalta
Team meeting to draft report
- Depart by train from Simpheropol to Odessa
- Team meeting to draft report
- April 12** Odessa
- Oblast Clinical Hospital
 - HIV/AIDS Training Workshop
 - Maternal and Child Health Department
 - American International Health Alliance Project
 - PLWHA Network
- April 13** Depart by car Odessa to Nikolaev
- Nikolaev
- Oblast Health Administration
 - Nikolaev Oblast AIDS Center
 - City Maternity Hospital #3
 - Nikolaev Oblast Clinical Hospital, Obstetrics/Gynecology Department
- Depart by car from Nikolaev to Kiev
- April 14** Kiev
- UNICEF
 - UNAIDS
 - Draft Report

 - April 15 Kiev
 - USAID, Office of Health and Social Transition
 - POLICY Project
 - Team meeting to plan debriefing
- April 16** Debriefing at USAID (Office of Health and Social Transition)
Team members draft report
- April 17** Judith Justice and Roger Drew depart from Kiev
- April 19** Stephen Lee departs from Kiev

APPENDIX D

QUANTITATIVE INDICATORS TABLES

Table 1
Quantitative Indicators for Monitoring PMTCT Programs, Indicator One

Indicator One: Percentage of HIV-Infected Women Receiving a Complete Course of ARV Prophylaxis to Reduce the Risk of MTCT

Indicator Level	National Program and Behavior		
Description	Different Methods of Measurement	Results	Comments
<p>This indicator uses the total number of HIV-infected pregnant women who receive a complete course of ARV prophylaxis for PMTCT purposes as the numerator in the calculation. This figure is available from the Ukrainian Ministry of Health. However, the way this is currently calculated, Ukraine uses a different denominator from that recommended by UNAIDS for UNGASS reporting purposes.</p>	<p>Within Ukraine, this indicator is currently calculated as a percentage of those HIV-positive women who deliver.</p>	<p>In 2002, the number of HIV-positive women receiving ARV prophylaxis for PMTCT was 1,148. The number of HIV-positive women who delivered was 1,262.¹ This makes the value for this indicator 91 percent.</p>	<p>Advantages</p> <ol style="list-style-type: none"> 1. This method excludes HIV-positive women who have abortions. Such women are by definition not eligible for PMTCT measures. 2. Almost all pregnant women in Ukraine deliver in health facilities. Data on these deliveries are routinely collected. This method uses that available data. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. This method differs from that used internationally by UNAIDS. This makes comparisons with other countries difficult.
	<p>The UNAIDS system for reporting to UNGASS calculates this indicator as a percentage of all pregnant women. This is estimated by multiplying the estimated number of women who become pregnant in a country annually by the HIV prevalence among pregnant women.</p>	<p>In 2002, the number of HIV-positive women receiving ARV prophylaxis for PMTCT was 1,148. The total number of pregnant women was 409,199, and the HIV seroprevalence was 0.494 percent. The number of pregnant HIV-positive women was 2,022. This makes the value for this indicator 57 percent. However, a UNAIDS report to UNGASS used a figure of 49.6 percent.²</p>	<p>Advantages</p> <ol style="list-style-type: none"> 1. This method allows the number of HIV-positive pregnant women to be estimated in almost all countries of the world, including those whose health systems are less well developed than Ukraine's. It therefore allows for intercountry comparisons. 2. This method does highlight the issue of high abortion rates for HIV-positive women in countries where this is the case. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. It makes little sense to include HIV-positive women who have abortions within this denominator as these women are not eligible for PMTCT. 2. Significant distortions occur with the use of this method in countries with high abortion rates for HIV-positive women. For example, in the case of Ukraine in 2002, the highest figure that would have been possible would have been 62 percent, even if all 1,262 HIV-positive women who delivered had received ARV PMTCT prophylaxis.

¹Document entitled "Project Achievements" supplied by UNICEF.

²From *Progress Report on the Global Response to the HIV/AIDS Epidemic, 2003* (UNAIDS 2003). Although this figure is attributed to the Ukrainian Ministry of Health, it is unclear from where this figure is derived. It is likely a UNAIDS recalculation based on figures supplied by Ukraine.

Table 2
Quantitative Indicators for Monitoring PMTCT Programs, Indicator Two

Indicator Two: Percentage of HIV–Infected Infants Born to HIV–Infected Mothers

Indicator Level	Impact		
Description	Different Methods of Measurement	Results	Comments
<p>This indicator seeks to document the number of HIV–infected infants as a percentage of the total infants born to HIV–positive mothers. The main problem faced in measuring this indicator is the difficulty of diagnosing HIV infection in children under the age of 18 months. This is not possible using conventional HIV antibody testing because of the presence of maternal antibodies. It is possible using direct tests for virus antigen (e.g., PCR), but this form of testing is rarely available in resource-poor settings.</p>	<p>Within Ukraine, this indicator is currently calculated by following annual cohorts of children born to HIV–positive women and identifying the total number of confirmed HIV–positive children at 18 months as a percentage of this total cohort.</p>	<p>For 2002, the Ministry of Health reports that this figure is 10 percent; this figure is widely quoted. Given a denominator of 1,262 (assuming no multiple births), this would give a total of 126 HIV–infected children born that year. The actual figures used by the MOH for this calculation do not appear to be readily available.</p>	<p>Advantages</p> <ol style="list-style-type: none"> 1. This method measures actual numbers of children with HIV. 2. It includes benefits of all elements of PMTCT, including mode of delivery and infant feeding practices, not just ARV drugs. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. In the absence of PCR, figures for an annual cohort will be incomplete for a long period. For example, complete figures for the 2002 cohort will only be available in June 2004. Figures prior to that time are likely to underestimate the true figure. 2. Children who die or are lost to follow up before 18 months are likely to be treated as HIV negative. This is likely to result in underestimation of the true level of transmission. 3. There appears to be some confusion between this indicator and data on transmission routes. In 2003, official figures reported that 9.7 percent of all new registered HIV infections occurred as a result of vertical transmission. It is possible that this is the source of the 10 percent figure that is widely quoted.³ 4. This method differs from that used internationally by UNAIDS. This makes comparisons with other countries difficult.
	<p>The UNAIDS system for reporting to UNGASS estimates this indicator using the formula $\{T*(1-e) + (1-T)\}*\nu$ where T is the proportion of HIV–positive women receiving ARV prophylaxis for PMTCT purposes, e is the efficacy of the ARV treatment provided, and ν is the rate of transmission in the absence of any treatment.</p>	<p>UNAIDS recommends use of default values for e and ν of 0.5 (50 percent) and 0.25 (25 percent), respectively, unless clear evidence of different values is available. The use of these values and the figures of 0.496 for T results in a transmission rate of 18.8 percent, which is the figure contained in the UNAIDS report to UNGASS, 2003.</p>	<p>Advantages</p> <ol style="list-style-type: none"> 1. This method allows this indicator to be estimated timeously in countries where PCR technology is not available. It therefore allows intercountry comparisons. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. This method is an estimation of impact and not actual measurement. 2. Although UNAIDS describes this as a simple formula and supplies an Excel spreadsheet to calculate it, it is quite complex. Errors are commonly made.⁴ 3. This method only calculates a notional effect of ARV drugs. It excludes any effects of mode of delivery or infant feeding practices. 4. If default values of e and ν are used, it is simply a different way of expressing Indicator One. Given the way UNAIDS calculates this, there are significant distortions within the indicator in countries with high abortion rates for HIV–positive women, such as Ukraine. 5. If default values for e and ν are used, the lowest rate that can be achieved (where $T=1$) is 12.5 percent. 6. It is likely that the rate for ν is higher in Ukraine than 25 percent. Official figures state that it was 27.6 percent in 2000,⁵ but this may be an underestimation of the actual transmission rate in the absence of any interventions. 7. Variations in ARV regimes between countries may make intercountry comparisons difficult. 8. It is unclear to what extent the default rate of e of 0.5 reflects reality in Ukraine. This would mean that 50 percent of all women given ARV prophylaxis for PMTCT deliver an HIV–infected child. It seems likely that the true value of e may be higher but it is likely to vary depending on the regime followed.

³ This information is taken from a two-page document, “Project Achievements,” supplied to the review team by UNICEF.

⁴ Analysis of UNGASS indicator: national return form II–2 for Ukraine shows a calculation error. T has been entered as 1.1. It is not possible for T to have a value greater than 1.

⁵ This information is taken from a two-page document, “Project Achievements,” supplied to the review team by UNICEF.

APPENDIX E

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