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An Assessment of HIV/AIDS and the Prevention of Mother-to-Child Transmission of HIV in Kazakhstan

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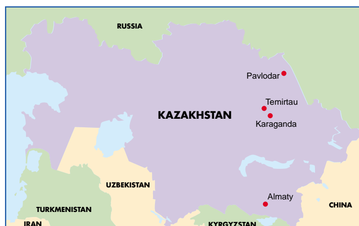
BACKGROUND

Kazakhstan has an estimated total population of 15 million, 56% of whom live in urban settings.[1,2] The epidemiology of HIV infection in Kazakhstan is similar to the rest of Eastern Europe and Central Asia and this virus is primarily transmitted among injecting drug users (IDUs), sexual partners of IDUs, and through mother-to-child transmission (MTCT).



As of March 1, 2004, there were a total of 4,107 HIV cases registered by the Republican AIDS Center, including 202 HIV+ pregnant women and 99 infants born to HIV+ women. Of the infants, 7 have a confirmed HIV+ status, 19 are seronegative, and 69 are still under observation.[3] Basic maternal and child health indicators for Kazakhstan are shown in Table 1.

Infant mortality rate (IMR)	30.54 deaths/1,000 live births (est. 2004)[1]
Reported maternal mortality ratio	50 deaths/1,000 live births (est. 1985-2002)[4]
Adjusted maternal mortality ratio*	210 deaths/100,000 live births (est. 1985-2002)[4]
Total fertility rate	2.0/woman (2002)[5]
Literacy rate for females	99% (2000)[5]

*adjusted for underreporting and misclassification

Table 1: Basic maternal and child health indicators for Kazakhstan.

METHODOLOGY

With funding from USAID, a team from the American International Health Alliance (AIHA) conducted a situational assessment of the prevention of mother-to-child transmission (PMTCT) of HIV in Kazakhstan using an adapted WHO rapid assessment tool.[6] Data was collected through interviews at 16 healthcare institutions and five non-governmental organizations (NGOs) in Temirtau, Karaganda, and Pavlodar.

TEMIRTAU ASSESSMENT

HIV/MTCT Situation

As of October 1, 2003, 1,087 HIV+ individuals had been officially registered in Temirtau (pop. 170,500 in 2002); of these, 298 were women[7] and 107 HIV+ individuals were selected for antiretroviral therapy (ART) using Global Fund grant money that was designated for this purpose.

Total Population	170,500
Total # of officially-registered HIV/AIDS cases	1,087 (Oct. 2003)[4]
Routes of Transmission	
Syringe sharing	73.2%
Heterosexual	21.5%
Total # HIV+ pregnant women	66
Total # pregnancies	87
Births	38
Miscarriages	15
Abortions	23

Table 2: Temirtau HIV/AIDS and MTCT situation.[7]

Current PMTCT Structure

Temirtau's healthcare structure is the same system of primary medical care that existed in Soviet times. There are two women's clinics where pregnant women, including those who are HIV+, are monitored.[8] HIV+ pregnant women are identified when they become patients at, or are referred by the AIDS Center to, one of the women's clinics.[9] The HIV+ pregnant women:

- receive Retrovir from the 14th week for PMTCT;
- return to the AIDS Center for the drug every 10 days; and
- deliver at the city's only maternity hospital, which prior to October, 2003, qualified as the only facility able to handle HIV cases for the Karagandinskya Oblast.

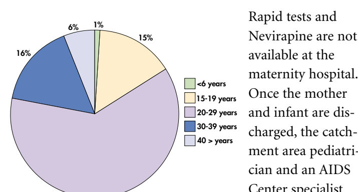


Figure 1. Age distribution of HIV+ women.[7]

Rapid tests and Nevirapine are not available at the maternity hospital. Once the mother and infant are discharged, the catchment area pediatrician and an AIDS Center specialist continue to monitor their progress.[10]

The Temirtau AIDS Center has several partnerships with local NGOs:

- Staff work together with NGOs who coordinate syringe exchange at "trust points" (six hospital-based and one mobile) for IDUs. The trust points were financially supported by UNAIDS, but are currently experiencing significant financial difficulties.
- They also work with "Shapagat," an NGO for people living with HIV/AIDS (PLWHA), which has received grants from the Soros Foundation-Kazakhstan since July 2002, and is highly experienced in outreach work among IDUs and PLWHA.[11]

Strengths and Weaknesses

One of the main strengths of providing HIV/AIDS care and MTCT prevention is the proactive attitude of the local AIDS Center team, which has made it possible to shape an effective system of detection and healthcare continuity for HIV+ pregnant women in Temirtau. However, there are weaknesses as well:

- OB/GYN specialists need training in prenatal care and rational delivery of HIV+ pregnant women.
- Neonatologists and pediatricians need training in the care of newborns and children of HIV+ mothers.
- All specialists need training in counseling.
- The AIDS Center needs computers and laboratory equipment to determine CD4 counts.

KARAGANDA ASSESSMENT

HIV/MTCT Situation

The HIV epidemic in Karaganda (pop. 436,900 in 2001) has been officially recorded since 1997. By the end of 2003, 1,296 HIV+ individuals were officially registered; of these, approximately 30% were women of child-bearing age. An overwhelming majority of HIV+ individuals are IDUs and the prevalence of HIV among IDUs in Karaganda is 2.5%.[12]

Total Population	436,900
Total # of officially-registered HIV/AIDS cases	1,296 (Dec. 2003)[4]
Total # HIV+ pregnant women	74
Total # pregnancies	101
Miscarriages/Abortions	53
Births	48
HIV+	4
HIV-	39
Still need follow-up testing	5

Table 3: Karaganda HIV/AIDS and MTCT situation.[12]

Current PMTCT Structure

If they test positive for HIV, pregnant women are registered at the AIDS Center and referred to a family medicine clinic for prenatal care.[13] HIV+ pregnant women receive Retrovir starting in the 14th week of gestation. Labor takes place at City Maternity Hospital No. 2, in an isolated unit. At the maternity hospital:

- newborns receive Retrovir syrup;
- the director of the observation unit, who has not undergone special training, is in charge of deliveries for HIV+ women in labor; and
- planned C-sections for HIV+ women are not practiced.[14]

The purchase of Retrovir is centralized and it is available in sufficient quantity for all of the HIV-infected mothers and their newborns. Rapid tests and Nevirapine were not available in the city, nor at the maternity hospital at the time of the assessment.[14] Only ELISA tests are performed at the Karaganda AIDS Center; there is no equipment for running PCR or determining CD4 counts.

Strengths and Weaknesses

A strength of the Karaganda HIV/AIDS program is that the active identification of HIV-infected individuals, including pregnant women, is pursued through the "trust points" for IDUs. Their activities are coordinated by the AIDS Center, and have been financially supported by the Soros Foundation-Kazakhstan (up to 2001-2002) and through the municipal budget. The offices implement syringe exchange and the dispensing of condoms.

Weaknesses of the Karaganda HIV/AIDS program include the following:

- The AIDS Center is responsible for determining the strategy and tactics of the PMTCT program in Karaganda, but it does not regard this as a priority.
- The AIDS Center does not promote the activities of NGOs that are working with HIV risk groups and PLWHA.
- Stigmatization and discrimination of HIV+ pregnant women among medical personnel is a serious problem.
- Maternity hospital staff, neonatologists, and pediatricians do not have sufficient knowledge and skills regarding the organization and provision of care for HIV+ pregnant women during pregnancy and labor, or of their newborns.
- There is no system of psychosocial support for HIV+ pregnant women, their newborns, or their families.
- There is no unified computerized database of HIV+ individuals.

PAVLODAR ASSESSMENT

HIV/MTCT Situation

Since the beginning of the epidemic in 1996, 782 HIV+ persons have been officially registered in Pavlodar (pop. 300, 500 in 2002); of these, 150 were women.[15] The greatest number of cases per year occurred in 2000 and represents an outbreak among IDUs.

Total Population	300,500
Total # of officially-registered HIV/AIDS cases	782 (Oct. 2003)[4]
Men	632
Women	150
Total # HIV+ pregnant women	45
Total # pregnancies	54
Miscarriages	3
Miscarriages	33
Births	18
HIV+	1
HIV-	8
Still need follow-up testing	9

Table 4: Pavlodar HIV/AIDS and MTCT situation.[15]

Current PMTCT Structure

Prenatal care of HIV+ pregnant women is provided at three women's clinics and at four Family Planning Centers (FPCs). The idea of concentrating these patients in a single women's clinic is not supported. Women receive ART regimens beginning at week 30 or 34 of gestation. The Oblast Maternity Hospital is the designated service provider for HIV+ women. At the Hospital:

- elective C-sections are recommended at 38 weeks;
- newborns began receiving Retrovir syrup in May 2003; and
- providers note the erratic supply of drugs.

Children of HIV+ mothers are monitored in the catchment area network. There have been no special training programs for pediatricians; however, the AIDS Center conducts quarterly seminars on PMTCT and the monitoring of children.[16]

Strengths and Weaknesses

The AIDS Center in Pavlodar is the organizational leader of HIV/AIDS efforts in the region. AIDS Center staff work with two local NGOs:

- "Turan" deals with the problem of HIV+ tuberculosis patients.
- "Anti-SPID" (Anti-AIDS) deals with the problems of commercial sex workers (CSWs). It is funded by Soros Foundation-Kazakhstan and UNAIDS.

These NGOs recruit volunteers at the Maternity Hospital. Training for registration of PLWHA by both NGOs is presently under way.[17]

Several weaknesses were identified in Pavlodar's PMTCT program.

- There is no unified, computerized database of HIV+ individuals.
- The AIDS Center does not have the necessary equipment to measure CD4 counts.
- There is no system of psychosocial support for HIV+ pregnant women, their newborns, or their families.

RECOMMENDATIONS

To achieve a more effective PMTCT program in Kazakhstan, the following is recommended:

- Equip women's health centers with the necessary supplies to handle the prenatal and postnatal care of HIV+ women.
- Have AIDS Center specialists develop and implement PMTCT training programs for OB/GYNs and pediatricians.
- Set up separate wards in maternity hospitals for HIV+ pregnant women who present with combined pathology (tuberculosis, syphilis, etc.).
- Supply maternity hospitals with Rapid Tests and Nevirapine.
- Train professionals responsible for labor and delivery of HIV+ women. A two-week on-site PMTCT training at the Southern Ukraine AIDS Education Center (SUAEC) located in Odessa is recommended.
- Conduct training for epidemiologists in rational, cost-effective approaches and sanitary-epidemiological guidelines for the care of HIV+ individuals.

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11. Interview with the director and volunteers of "Shapagat," Temirtau, June 16, 2003.
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15. Pavlodar Oblast AIDS Center report, 2003 and personal communication with AIHA staff in Kazakhstan.
16. Interview with Pavlodar Oblast Maternity Hospital staff, June 18, 2003.
17. Interview with "Turan" and "Anti-SPID" staff, June 18, 2003.