



USAID
FROM THE AMERICAN PEOPLE

Maternal and Child Health Initiative

Prevention of Mother-to-Child Transmission of HIV and Family Planning Practices in HIV-Infected Women Facility Survey

Report of Main Findings

Natalia V. Vartapetova
Anna V. Karpushkina



Moscow 2006

Table of Contents

Acronyms	3
Introduction	4
Acknowledgements	4
Executive Summary.....	6
Background.....	12
Methodology.....	13
Study Design	13
Sample Design.....	17
Study Instruments	18
Field Implementation.....	19
Analysis	19
Ethical Aspects of the Study.....	20
Data from interview.....	21
Demographic and Social Characteristics of HIV-positive Women.....	21
HIV History and Health Service.....	21
Fertility History and Family Planning	26
PMTCT	36
Data from Medical Records.....	43
Demographic and Social Characteristics of HIV+ Women, HIV and AIDS History, and Concurrent Diseases	43
Fertility History and Family Planning	46
PMTCT	49
Conclusions	58
Discussion and Recommendations	60
Annex One.....	65
Annex Two	66

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
IUD	Intrauterine Device
IDU	Injection Drug User
HIV	Human Immunodeficiency Virus
HIV+	HIV-Positive
JSI	John Snow, Inc.
MCH	Maternal and Child Health
MCHI	Maternal and Child Health Initiative
MTCT	Mother-to-Child Transmission of HIV
MOH&SD	Ministry of Health and Social Development
PLWHA	People living with HIV and AIDS
PMTCT	Prevention of Mother-to-Child Transmission of HIV
RRM	Responsible Members of the Regional Teams in Health Facilities
RS	Regional Supervisor
STI	Sexually Transmitted Infection
USAID	U.S. Agency for International Development
WIN Project	Women and Infant Health Project

Introduction

Acknowledgements

This study was developed by the Maternal and Child Health Initiative (MCHI) and funded by USAID, with consultative assistance from specialists from John Snow Inc. (JSI) and the involvement of Russian experts in HIV and AIDS. The Russian Ministry of Health and Social Development (MOH&SD), Federal Service on Surveillance in the Area of Consumers' Rights and Human Wellbeing, the U.S. Agency for International Development (USAID), the Russian Federal Center on HIV/AIDS, Scientific-Practical Center for Assisting Pregnant Women and Children with HIV-Infection approved the study design and methods.

The authors wish to express sincere thanks to the following individuals who gave their time and energy to help ensure the success of this endeavor:

MCHI team:

Yulia V. Boyarkina, Information and Communication Coordinator

Crystal Ng, Project Coordinator

JSI advisors:

Patricia David, Senior Evaluation Advisor

Mary Lee Mantz, MCHI Senior Advisor

Andrew Fullem, Director of JSI Center for HIV and AIDS

The study would have been impossible without the active participation of the **regional teams:**

- **Altaysky Kray** – V.A. Lukyanova, Deputy Head of Regional HIV/AIDS Prevention and Control Center, S.N. Zarikova, T.N.Dmitrieva, O.L.Semina, I.V. Preladova, I.S.Makarov, V.A.Ponomareva, L.S.Zaprudaeva, G.G. Toporova, L.A. Khirnyh.
- **Irkutsk oblast** – E.V.Popova, Leading specialist of Health Department, B.V.Zvetkov, Head of HIV/AIDS Center, T.A.Soldatova, E.A.Axenova, E.G.Kokunova, A.A.Gorodskoy, A.V.Sizich, G.A.Semenova, L.A.Gukalova, N.G.Pushmina, N.Y.Fazlieva, N.L.Agarina
- **Khabarovskiy Kray** – A.I.Zherdeva, Head of HIV/AIDS Center, S.A. Ushkalova, T.V. Savelyeva.
- **Krasnoyarsk kray** – V.V. Upatov, Deputy Head of Municipal Health Department; A.A. Dvoyekonko, Deputy Head of Regional HIV/AIDS Prevention and Control Center; N.V. Protasova, M.A. Malysheva, T.I.Demidova, E.R.Petrova, Y.G.Garber, O.B.Biryukova, T.Y.Shmaneva, A.V.Mariasova, I.Y.Rostovceva, I.D.Maryanchik, I.I.Evdochenko, T.V.Vigovskaya, G.T.Sokolovskaya, V.L.Dudar, L.G.Popova, N.A.Civcina, A.R. Shmidt, O.Y.Borisova, L.I.Popova, N.A.Homenko, V.V.Kozukhar, N.A.Fedotova, A.A.Popov, L.D.Zamskova.
- **Murmansk oblast** – L.F. Kovalenko, Deputy Head of the Health Committee, I.A.Morenko, Deputy Head of Regional HIV/AIDS Prevention and Control Center, S.R. Didenko, City Epidemiologists, N.E.Arefyeva, L.N. Subchinskaya, E.B.Krivoshey,
- **Orenburg oblast** – T.I.Bezmenova, Deputy Head of Perinatal center, L.E. Sedina, G.P.Cherepova, S.V.Kasyaeva, T.I.Yakovleva, G.L.Novicjenko, E.N.Malovichko, B.I.Glushko
- **Perm oblast** – E.V.Goldireva, Head of Oblast Obstetrician – Gynecologists, A.V.Kruten Deputy Head of Perm City Health Department, N.I.Menshakova, V.I.Lipina, E.A.Zemskova, T.I.Smirnova, E.A.Sadovnichenko, A.M.Pospelov
- **Tyumen oblast** – O.P.Gorbunova, Head of Oblast Obstetrician – Gynecologists, N.V.Ivanova, I.V.Lazarenko, E.A. Utyganova, Z.Y.Gerus, G.V.Lutikova, Lebedeva

PMTCT+FAMILY PLANNING

The project also owes special thanks to the following individuals for their much-appreciated advice and assistance:

USAID/Russia: Elena Borisovna Gurvich, Senior Advisor on HIV/AIDS; Larissa Borisovna Petrossyan, Project Manager, Health Division.

Russian Ministry of Health and Social Development: Dr. Valentina Nicolaevna Sadovnikova, Deputy Manager of the Organization and Development of Maternal and Child Care Unit of the Medical and Social Problems of Family, Maternity, and Childhood Department.

Federal Service on Supervision of Protection of Consumer Rights and Human Wellbeing: Dr. Alexander Timofeevich Goliusov, Head of the Unit for HIV/AIDS Surveillance.

Federal Center for HIV/AIDS Prevention and Control: Dr. Oleg Geraldovish Yurin, Deputy Head.

Dr Rimma Alexandrovna Potemkina Leading Researcher of the State Institute for Preventive Medicine for her assistance in conducting the Study's training.

This study was made possible through support provided by USAID/Russia, under the terms of Contract No. HRN-I-00-98-00032-00 Delivery Order No. 813 and John Snow, Inc.

The contents and opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID or JSI.

Executive Summary

Background

The USAID-funded Russia Maternal and Child Health Initiative (MCHI) aims to improve the outcomes, safety, effectiveness and “client-friendliness” of maternal and infant health services by training health care providers in evidence-based medical practices. The project established training programs and information, education, and communication interventions in 16 Russian regions for providers of a range of women’s and newborn services and their clients. MCHI has developed and promoted an integrated comprehensive model of maternal and child health (MCH) services with maternity and child care, reproductive health, and HIV and AIDS prevention.

This study is a component of MCHI’s work in HIV and AIDS. The Initiative’s work in family planning and HIV and AIDS aims to reduce the risk of HIV transmission; improve the quality of prevention and healthcare services for women living with HIV and their children; and increase the use of modern contraception to reduce unwanted pregnancies, reduction of child abandonment and the abortion rate. Determining the current situation with respect to prevention of mother-to-child transmission of HIV (PMTCT) and family planning for HIV-positive (HIV+) women and its comparison with international benchmarks will support program development to improve practices, inform training programs and increase their effectiveness, and stimulate policy change.

A facility study of PMTCT and family planning services provided to HIV+ women was conducted in 8 MCHI regions (Irkutsk, Murmansk, Orenburg, Perm, and Tyumen oblasts and Altaysky, Khabarovskiy, Krasnoyarskiy, and Primorsky Krai) in facilities both participating and not participating in MCHI program interventions.

The focus of MCHI interventions in PMTCT is on the promotion of voluntary HIV counseling and testing for women of reproductive age, as well as medical, social and psychological support to women with HIV; ARV provision in pregnancy and delivery and to their newborns; regular health care; and early HIV testing of children born to HIV+ mothers. In accordance with international best practices and state-of-the-art technologies, MCHI considers family planning an essential component of PMTCT in order to prevent unintended pregnancies and abortions. MCHI strives to support efforts to counsel women of reproductive age at any stage in the health care system, including women’s consultations, gynecological units, HIV and AIDS centers and, maternities.

Project interventions consist of clinical and counseling training for health providers at all levels, community-based and facility-based information, education, and communication strategies for both families and providers, and advocacy and policy promotion. PMTCT training aims to more widely institute evidence-based medical practices, resulting in reduced stigma and discrimination of people living with HIV and AIDS (PLWHAs) by health care providers; reduced frequency of unnecessary and unsafe medical interventions during antenatal, delivery, and neonatal care that may increase risk of MTCT; decreased risk of child abandonment; and improved contraceptive and PMTCT counseling.

MCHI is implemented by John Snow, Inc. Collaborating partners include Russian Ministry of Health and Social Development, Federal Service on Surveillance in the Area of Consumer’s Rights and Human Wellbeing, Russian Federal Center on HIV and AIDS, Scientific-Practical Center for Assisting Pregnant Women and Children with HIV-infection, and the Russian Obstetricians and Gynecologists Society.

Study Objectives

This quantitative study consisted of two parts. The first included a survey of pregnant women living with HIV admitted to maternity hospitals or gynecological departments for delivery or abortion from May 1 to October 31, 2005. The second part was a retrospective study of medical records of women living with HIV admitted to maternity hospitals or gynecological departments for delivery or abortion from January 1, 2002 to October 31, 2005. The aim of the study is to provide a socio-demographic profile of HIV+ women coming to facilities for abortion or delivery, to provide quantitative information on current practices and knowledge that will allow the appropriate authorities to strengthen training programs, improve clinical services, and to provide a firm basis for policy discussions.

Methodology

The facility survey obtained quantitative data from 458 HIV+ women who received services in maternities and gynecological units and 2,528 charts of deliveries and abortions in eight MCHI regions. Regional Health Administrations and heads of health facilities providing care to women living with HIV were involved in the study. MCHI staff provided training in conducting the study to regional supervisors in Moscow who were senior public health administrators in participating regions. These supervisors trained interviewers and other research team members to conduct the study in their regions. Over the course of six months, medical staff responsible for the study conducted interviews and extracted information from medical charts in accordance to the strict ethical demands of the study.

Sample sizes for both the client interviews and chart abstractions were calculated using HIV prevalence in the regions. The regional study teams were responsible for data collection and entry. MCHI staff analyzed the data using the SPSS statistical package.

The analyses are based on aggregated reports of individual respondents and data from medical records, and provide estimates reflecting reported and documented practices in the average facility and experience of the average client in the entire network of health institutions. No analyses were performed that would enable identification of individual clients or regions. All participants provided informed consent prior to administration of the survey. At the end of the interview, each woman was counseled on PMTCT and family planning and given educational materials on these subjects and small souvenirs (a set of body lotion and soap). All interviewers were instructed of their responsibility to be compliant with strict confidentiality practices and trained in methods for preserving the survey's ethical requirements and confidentiality.

A total of 470 postpartum and post-abortion women living with HIV were contacted for interviews. Of those contacted, 12 refused to be interviewed. The total number of clients successfully interviewed was 458. Two hundred and sixty-one postpartum women were interviewed prior to discharge from the maternity where the birth took place, and 197 abortion clients were also interviewed prior to or following an abortion.

Data from 1,057 delivery charts and 1,071 abortion charts of women with HIV in maternities or gynecological units were analyzed.

In both the interviews and medical record reviews, quantitative measures of key practice indicators were calculated. Indicators include practices relevant to PMTCT, such as HIV counseling and testing; antenatal, intra-partum and postpartum, and neonatal health care, including provision of prophylaxis ARV; MTCT prevalence; and risk of abandonment. Information obtained from clients also included socio-demographic characteristics, reproductive history, how they think they acquired HIV, the percent of clients that received family planning counseling, experience of using contraception, and knowledge of and preference for contraceptive methods and sources of information on family planning.

PMTCT+FAMILY PLANNING

Medical records also provided information about the current stage of HIV infection, previous ARV treatment, history of injecting drug use (IDU), prevalence of specific diseases such as viral hepatitis and sexually transmitted infections (STIs) that affect women's health, and complications related to delivery and abortion.

Results

HIV history

Sexual contact is one of the primary self-reported means of HIV transmission among women in this group. Approximately 58% of interviewed clients reported that they were infected from a sexual partner. This differs from data collected as part of the medical record review, where 50% of the women had IDU experience.

Many pregnant women did not know their HIV status prior to the current pregnancy. Sixty percent of HIV+ women who took their pregnancy to term reported learning of their HIV status during antenatal screening. A much smaller percentage of abortion clients, 36.1%, reported learning of their HIV status during the current pregnancy. Approximately 30% of clients had complete pre- and post-test counseling, and 11% of women did not know they had been tested until they received their results.

According to women's self-reporting, 40% of postpartum and 19% of abortion clients were identified as HIV+ in 2005. Most women (68%) had known their HIV+ status for fewer than four years. Very few women had developed AIDS and were on ART for treatment of their HIV disease.

Among these women, there was a high prevalence of STIs and viral hepatitis. According to medical records, 37% of postpartum and 21% of abortion clients who were tested for STIs were diagnosed with an STI. However, this is probably an underestimation of STI prevalence because only 72% of postpartum women and 85% of abortion clients were tested for STIs. Viral hepatitis (mainly hepatitis C) was diagnosed in an even higher proportion of the women - 57% of postpartum and 67% of abortion clients.

During interviews, some women complained about feeling stigmatized due to their HIV status during their care in health institutions (18% in women consultations, 15% in maternities, and 10.2% in gynecological units).

Family Planning

Nearly three-quarters of clients (73%) reported a previous pregnancy (mean = 2.3). An equal percentage of clients previously had an abortion (mean abortions = 1.9). Forty-one percent of interviewed women living with HIV had no children.

The majority of interviewed women reported that the current pregnancy was unplanned, though women seeking an abortion were much more likely to report this (54% of postpartum and 94% of abortion clients). Forty percent of abortion clients reported that they used no contraception during the year prior to the current pregnancy. About 35% used a contraceptive method immediately prior to this pregnancy, but 89% of those using contraception became pregnant. The two family planning methods that failed most frequently were condoms (74% of clients) and fertility awareness-based and withdrawal methods (18%). For abortion clients, the main reason for not using contraception was that they didn't like to use contraception (17%), but almost 21% had difficulty answering this question.

More than half of the interviewed women in both groups (65% of postpartum and 56% of abortion) considered health workers the most important source of information on contraception. However, only 49% of postpartum and 67% of abortion clients received contraceptive advice in the facility before discharge and about 46% were advised to use dual protection (condom and

PMTCT+FAMILY PLANNING

another modern family planning method). Only 28% of women gave a correct answer when asked at what time fertility returns following an abortion or delivery.

Fifty-five percent of the women interviewed wanted no more children (64% of postpartum clients and 43% of abortion clients).

Thirteen percent of women interviewed in gynecological departments and 2% interviewed in maternities were provided with a free contraceptive method by health workers.

In general, the distribution of methods women intended to use were those included in family planning counseling by health providers on available family planning methods but at much lower rates. Only 30% of women said they were going to use dual methods of protection. Very few women reported that they were counseled to use emergency contraception if they failed to use their preferred family planning method or thought that it had failed.

One-third of women said they need additional counseling on family planning. Preferred places to receive information on family planning were HIV and AIDS Centers (approximately 70% of total clients), women's consultations (46% of total clients), and maternities (23% of postpartum clients).

PMTCT

Interviews indicated that PMTCT counseling during pregnancy was provided to 80% of women, though a quarter of HIV+ women said they received no ARVs during the current pregnancy. This rate is slightly lower than that found in the medical record review (33%). The postpartum clients reported that the primary reasons for not receiving ARVs during pregnancy were the lack of antenatal care (38%) and unknown HIV status during pregnancy (19%). Distinguishing features of interviewed women who did not receive ARV prophylaxis include: lower-level or unfinished secondary education, no permanent employment, no constant partner, no health care during the current pregnancy, and no counseling on PMTCT. These women also typically already had children from previous pregnancies. According to the chart reviews, women with experience in injecting drug use are more likely to have no ARVs during pregnancy than women with no injecting drug use.

According to women's interview responses, about 5% of them were first diagnosed with HIV during delivery in maternities. According to the medical record review, the percent of women who learned of their HIV status during delivery was two times higher.

Among the women interviewed, about 85% reported they received ARV counseling during labor, of which 87% received ARVs in labor.

Between 2002 – 2005, 15% of HIV+ women had no ARV in delivery, primarily due to the fact that HIV diagnosis was not made until after delivery. Late identification of HIV in the mothers also led to a lack of infant ARV in about 5% of cases. Also, according to delivery charts, 2% of the children were breastfed or had mixed feeding.

Ninety percent of women said that their newborn received ARV after birth, and 93% of women were counseled prior to dosing. Ninety-seven percent of interviewed women were counseled on feeding practices, and the same proportion of children were fed with formula.

Overall, according to the interview in 2005, a complete ARV course was provided to only 66.7% of mother-infant pairs (and during the retrospective period, only in 62%).

Eighty-five percent of deliveries were vaginal and only 15% were by Cesarean section, which is known to reduce risk of HIV transmission by 50%. Less than half of these postpartum women were counseled on delivery options, and only 35% knew that Cesarean section is part of the PMTCT strategy. According to the medical records, complications after vaginal deliveries, which can increase MTCT risk, were noted in 47% of women. Rate of complications after

PMTCT+FAMILY PLANNING

cesarean section was 6%, so cesarean section is a safe method of delivery mode for HIV+ women.

Medical records revealed that about 4% of children 18 months and older were infected with HIV from their mothers, but also revealed that HIV status in 35% of children is unknown.

About 8% of children born to HIV+ mothers were abandoned in maternities.

Conclusions

Increased international attention has been placed on drastically reducing the frequency of mother-to-child transmission of HIV. In order to accomplish this goal, it is essential that greater numbers of pregnant women are routinely tested and counseled during pregnancy or labor and delivery, and for those women who test positive, that they and their children are offered and accept the full course of prophylaxis treatment.

Antenatal screening is the primary means by which women learn of their HIV status. Despite requirements detailed in the National PMTCT Guidelines to provide comprehensive counseling, most of the women in this study who were not provided both pre and post test counseling, and a small number of women were not even informed about HIV testing.

Access to and utilization of PMTCT services by women with HIV, and appropriate post-natal care for infants is low. The most alarming finding is the relatively limited number of women who were provided ARV prophylaxis in pregnancy and absence of information about HIV status of high number of children 18 months of age and older.

Scheduled Caesarean section was still was not a recognized and frequently practiced method of PMTCT among health providers, its rate the same as in the whole population.

Large proportion of women reported previous abortions and with current unintended pregnancies argues for the need to rapidly expand counseling and access to family planning services for women living with HIV. However, a little more than half of women were counseled in the health facilities. Many of them didn't know when fertility returns following an abortion or delivery.

Dual protection the most effective way to protect women from intended pregnancy, STI and HIV resistant type of virus, but it was advised by health providers to only half of women.

Recommendations

The results from the study indicate that while there has been progress in Russia, there is also a crucial need for further expansion and improvement of routine services. A number of critical areas for further attention identified through this research include:

1. Improve the skills of clinicians to provide comprehensive PMTCT services in a non-stigmatizing manner. Providers urgently need increased training in providing PMTCT counseling to ensure that women voluntarily accept the full range of services and complete the PMTCT cycle, including HIV testing, ARVs for the mother, ARVs for the infant, infant nutrition support, and family planning counseling.
2. Promote and improve access to integrated PMTCT services in polyclinics and other health facilities, including antenatal care clinics. The goal would be to provide more comprehensive and integrated PMTCT and family planning interventions.
3. Increase access to family planning for women living with HIV in order to address the significant unmet demand for this critical service. Given client preference for receiving family planning counseling from health workers, efforts need to be made to demonstrate the need for improved professional knowledge and practice. It is critical that women living with HIV be offered family planning, be informed about effectiveness of methods and voluntarily choose a method.

PMTCT+FAMILY PLANNING

4. For successful implementation of evidence-based standards for PMTCT and family planning for HIV+ women, it is important to demonstrate to regional health representatives of the various services, as well as to national decision makers, the current challenges with PMTCT and family planning practices as identified in this study. The data reported here should be used to stimulate discussions and action among MCH departments and HIV and AIDS services.
5. Implement institution-wide policies to address stigmatization of women living with HIV. Interventions should include activities and policies that address provider concerns regarding occupational exposure.
6. Train health authorities to continuously evaluate the quality of counseling and provide further training and guidance if improvements are needed.
7. Enhance the ability to identify the group of women who have factors which contribute to avoidance of health care settings, which is crucial to achieving maximal public health impact. Greater efforts need to be made to assess women's needs and develop approaches and strategies that will minimize barriers to accessing services.

The MCHI project has developed training materials and Reproductive Health Guidelines for HIV+ women and can be used more widely as a resource. The materials include specific guidance on comprehensive health care and family planning counseling for women with HIV and deal with the other health problems, such as drug addition and current diseases, which these women often have. These guidelines should be made widely available to all health personnel who provide care to HIV+ women.

The health personnel need to be trained to their use and health authorities need to promote the importance and provide the support (equipment, drugs, supplies, etc) needed to implement them. MCHI has developed a training curriculum that includes essential PMTCT information and practical sessions on skills in antenatal, obstetric, and neonatal care. To improve professional knowledge about PMTCT, MCHI has also developed Operational PMTCT Guidelines.

Both MCHI Guidelines have been officially adopted by the MOH and have been included in the National Project on HIV/AIDS.

Background

The USAID-funded Russia Maternal and Child Health Initiative (MCHI) aims to ensure the adoption of internationally-recognized evidence-based standards and practices by targeted health facilities in Russia. The project has been implemented since 2003 within the framework of the Russian-American Intergovernmental Cooperation and Bilateral Committee on Health, led in Russia by the Ministry of Health and Social Development of the Russian Federation.

MCHI is being implemented in 16 regions (Republic of Komi, Republic of Sakha (Yakutia), Kaluzhskaya, Novgorodskaya, Permskaya, Vologodskaya, Tyumenskaya, Irkutskaya, Murmanskaya, Omskaya, Orenburgskaya, Sakhalinskaya oblasts, Altaisky, Krasnoyarsky, Khabarovskiy, and Primorsky Krai), including 180 medical facilities servicing 10 million clients.

MCHI promotes a comprehensive package of maternal and child health (MCH) services including maternity and child care, reproductive health, and HIV and AIDS prevention. The aim of MCHI work in the area of HIV and AIDS is to reduce risk of HIV transmission and to improve the quality of prevention and healthcare services for women with HIV and their children. MCHI conducts needs assessments to identify significant and critical areas for improvement to better implement prevention of mother-to-child HIV transmission (PMTCT) and family planning practices as an integral part of PMTCT.

The primary purpose of the Prevention of Mother-to-Child HIV Transmission and Family Planning Practices in HIV-Infected Women Study is to provide a description of HIV+ women coming to facilities for abortion or delivery, and to measure key indicators relevant to PMTCT and family planning services. The data are focused on two particular areas of concern – practices and counseling: practices regarding contraception and contraceptive counseling for HIV+ women and practices, care, and counseling related to HIV and AIDS.

The study's data will support MCHI activities in education of healthcare professionals on effective and safe perinatal and family planning practices to decrease risk of MTCT, and will be used to develop strategies for improving health care for HIV-infected women and their children.

To investigate the situation in regions with different HIV prevalence, six regions with relatively high HIV prevalence and three regions with lower levels of HIV prevalence were selected, all of which are participating in the MCHI Project: Irkutsk, Murmansk, Orenburg, Perm, Tyumen oblasts, Altaisky, Khabarovskiy, Krasnoyarsky and Primorsky Krai. These regions demonstrated active interest in HIV and AIDS studies and had experience collecting quality data within the framework of previous MCHI research endeavors. Due to various factors, the team of Primorsky Krai was not able to properly organize this study and its data have not been included in the present analysis.

The target groups of the study were HIV-infected women admitted to maternities or gynecological departments for either delivery or abortion. The study included survey interviews with the women and retrieval of data regarding family planning methods and PMTCT from medical records. Medical records were not linked to the interviews in any way.

The report of the study is divided into three parts: Part I – Study Methodology; Part II - Data from Interviews; and Part III – Data from Charts. Each part consists four sections:

1. Demographic and social characteristics of HIV+ women;
2. HIV history, testing, counseling, and care;
3. Family planning practices; and
4. PMTCT practices.

Each section includes data from postpartum and abortion clients. For comparison of both groups, we try throughout the report to make the tables as comparable as possible. When there is not a significant difference between the two groups, data have been combined and analyzed together.

Methodology

Study Design

MCHI staff developed the study design and materials, selected regions and target facilities, trained regional teams, conducted the study, processed the survey data, and performed the analysis.

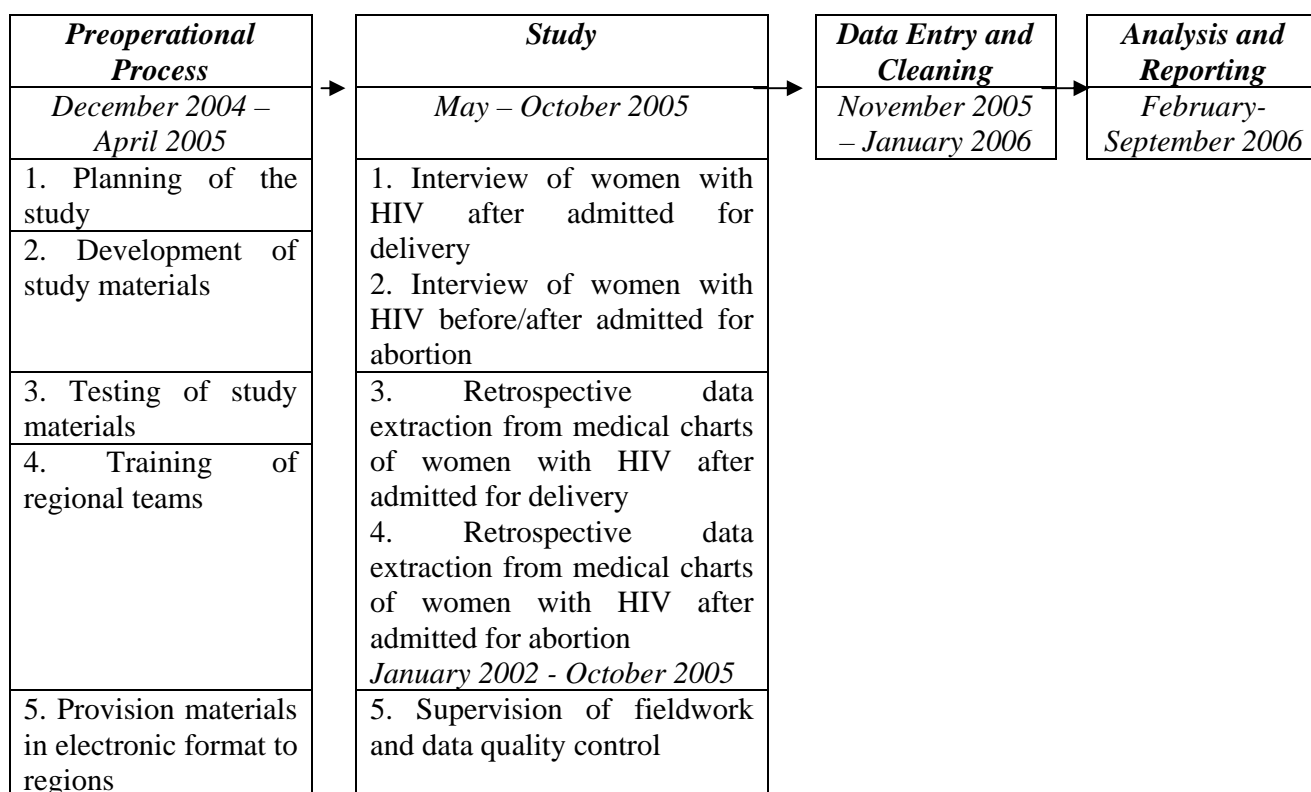
The study consisted of two parts:

- Interviews of women with HIV admitted to maternity hospitals or gynecological departments for delivery or abortion from May 1, 2005 to October 31, 2005.
- Retrospective study of medical records of women with HIV admitted to maternity hospitals or gynecological departments for delivery or abortion from January 1, 2002 to October 31, 2005.

The data are focused on two particular areas of concern – practices and counseling for HIV+ women. These include practices regarding contraception and contraceptive counseling and practices and counseling related to HIV and AIDS. Each part of the study provides valuable data. The medical chart is an official document that contains information on the clinical condition of the woman and her child’s health, diseases, and history of diseases, as well as on medical practices in the facility.

The personal experiences expressed in face-to-face interviews with women living with HIV is the most important part of the study. An interview provides information not only on women’s attitudes and preferences, life experiences, and practices in different facilities, but also on their perception of the attitudes of health workers. The timeframe and design of the study is presented in Chart 1.

Chart 1. Design of the study



Study sites

As stated above, the data reported here were collected in eight regions (Irkutsk, Murmansk, Orenburg, Perm, Tyumen oblasts, Altaysky, Khabarovsky, Krasnoyarsky krays) in the frame of an agreement between MCHI and regional health administrations. Prior to the study, MCHI staff sent a letter to regional health authorities via the regional MCHI coordinators, explaining the purpose of the study and enlisting their cooperation. They were asked to complete regional HIV and AIDS data sheets and a facility data sheet that obtained baseline information on the number of abortions and births by HIV+ women, as well as select facilities for the study and members of the regional research team. In March 2005, MCHI organized a workshop to present the study to regional leaders of maternity and child health departments and HIV Centers. After the meeting, the regions formed research teams.

In some regions, only one city with the highest HIV prevalence in the region participated in the study. If there were other sites with high HIV prevalence, they were also included in the research (Table 1). The regional health facilities selected were maternities and gynecological departments of hospitals that provide care to HIV+ women in delivery or abortion¹ on a regular basis. Fewer than half of the facilities included in the Study participated in other activities of the MCHI Project.

Table 1. Participating regions, cities, and health facilities in the Study (* MCHI pilot facilities)

Region	Cities and health facilities
Altaysky krai	Barnaul: Maternity #11, Regional Perinatal Center, City Hospital #5, Regional HIV Center; Bysk: Central maternity hospital, City hospital # 2, #4; Aleysk: City hospital; Kamen-na-Obi: City hospital; Zarinsk: City hospital; Slavgorod: City hospital; Rubcovsk: City hospital
Irkutsk oblast	Irkutsk: Regional Perinatal Center*, City Perinatal Center*, City hospital #8, Regional HIV Center; Bratsk: City maternity hospital*; Angarsk: City maternity hospital; Usole-Sibirskoe: City maternity hospital, Cheremhovo: City Perinatal Center
Khabarovsky Krai	Khabarovsk: Maternity hospitals #1*, #2, City hospital #1, #10, #11, Regional HIV Center; Amursk, Special Medical Center; Vanino: City hospital
Krasnoyarsky krai	Krashoyrsk, Maternity hospitals #1, #2*, #4, #5*, #6, City Mother and Child Health Center*, Regional HIV Center
Murmansk oblast	Murmansk, maternity hospital #1*, #2*, #3*, #4, City hospital, Hospital “Sevriba” , Regional HIV Center; Kola, City hospital; Kandalaksha, City hospital; Severomorsk, City hospital; Apatit, City hospital; Monchegorsk, City hospital; Kirovsk, City hospital;
Orenburg oblast	Orenburg, Perinatal center*, City hospital #2*, City hospital named after Pirogov, Regional hospital #2, Regional HIV Center
Perm oblast	Perm, City hospital #6, #21*, Regional HIV Center
Tyumen oblast	Tyumen: Maternity hospital #2*, #3*, Regional Perinatal Center, Regional HIV Center

¹ According to current Russian legislation, care for HIV-infected women is provided in any health facility. However, in some Russian regions, women with HIV can deliver or abort pregnancy only in special maternities or gynecological units for clients with infectious diseases.

PMTCT+FAMILY PLANNING

The regional Centers for HIV and AIDS prevention and control (HIV and AIDS Centers)² were also included to the study to provide information on the status of children born to HIV+ mothers during the retrospective period.

Study research teams:

Regional research teams were headed by a *Regional Supervisor* from a regional Center for HIV/AIDS Prevention and Control (HIV/AIDS Center) or a regional Mother and Child Health Department responsible for:

- Selection of interviewers
- Data collection
- Safe keeping of data
- Submission to MCHI
- Quality assessment
- Ensuring adherence to all ethical research principles

Supervisors in health facilities were from maternities and gynecological departments where HIV-infected women have deliveries or abortions. These staff members were heads of facility departments who, by virtue of their professional activity, are informed of the HIV status of women admitted to the hospital, have access to the institution's official medical information, and are responsible for the information's non-disclosure. Their tasks as part of this study included:

- Inviting women to participate in the interview
- Informing the interviewer of women's willingness to participate in the interview
- Extracting data from medical records
- Contacting a HIV/AIDS Center research team member responsible for the regional HIV database to obtain data on the HIV status of children delivered by women with HIV

Regional team interviewers were medical staff of the HIV/AIDS centers. The study employed strict practices that interviewers not know the interviewee's real full name.

A *technical employee* was in charge of collecting completed data forms and inputting information into the database. This employee had previous experience working with the SPSS system and participated in MCHI monitoring. This person did not conduct the interviews or extract data from medical records.

Survey of HIV-infected women and informed consent

The goal, objectives, and methods of conducting this study were explained to each HIV+ woman admitted to the healthcare institution for either delivery or abortion, and she was offered the opportunity to participate in the interview by the supervisor in this health facility. She/he provided the woman with the informed consent form to invite an interviewer (Annex One) and gave her time to think about the request and make a decision. When the woman was ready, the supervisor in the health facility asked for her decision; if the woman's decision was affirmative, the supervisor ensured that her interview was scheduled at her convenience and determined a site for the meeting.

At the appointed interview time, the interviewer confirmed that the woman had agreed to be interviewed; if she confirmed her consent to participate in the study by signing the informed consent form for interview (Annex Two), the interviewer conducted the interview in a

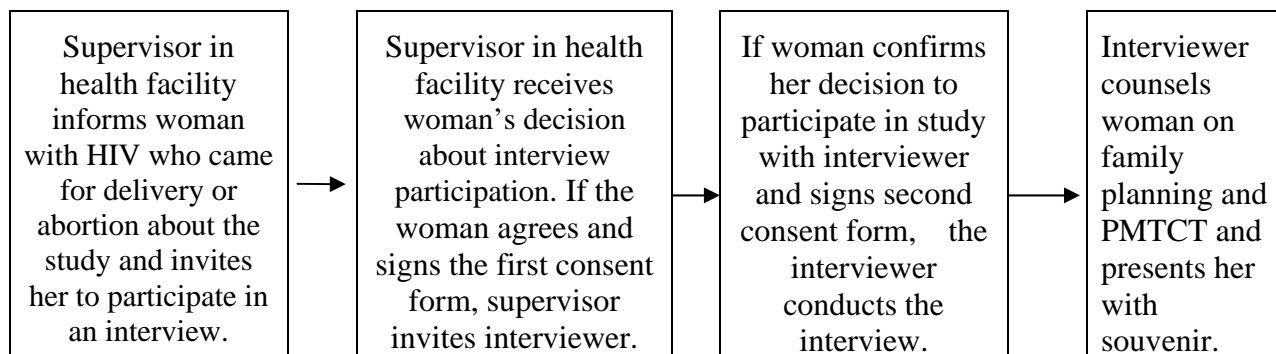
² An HIV/AIDS Prevention and Control Center is medical institution established to provide comprehensive care to people living with HIV. The Federal HIV/AIDS Center is a leading methodological and scientific organization. Each Russian region has a regional HIV/AIDS Center providing different types of assistance to people diagnosed with HIV: counseling, diagnostics, treatment, care (including PMTCT) and psychological support. The Center also collects statistics related to HIV/AIDS and reports to the MOH. They are also responsible for preventive programs for the population.

PMTCT+FAMILY PLANNING

confidential setting that was provided by the health facility supervisor. The interviewer informed the woman that she had the right to cancel her participation in the interview at any time. Postpartum women were interviewed immediately prior to discharge from a maternity ward, and abortion clients were interviewed before or after the procedure and prior to their discharge from the gynecological unit.

After completing the interview, the interviewer provided counseling to the woman on family planning and PMTCT, gave her educational materials on the subjects, and presented her with a souvenir (a set of body lotion and soap). Interviewers and supervisors in health facilities were asked to record refusals to participate in addition to those who consented.

Chart 2. Sequence of survey recruitment and participation in maternities or gynecological units



Analysis of Official Medical Records

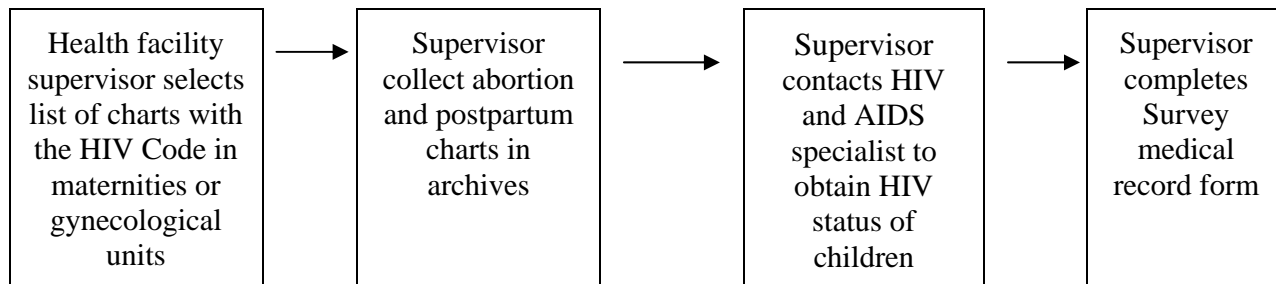
According to Russian rules, a special code is used to mark the charts of HIV-positive women admitted to health facilities. The supervisor of the medical record archive personally applied this mark on all charts of HIV+ women after either delivery or abortion from January 1, 2002--October, 31, 2005 and filled in the data from each chart on the forms provided by MCHI.

The four-year period of the retrospective study was proposed as a comparatively recent period of time that reflects the current PMTCT and family planning situation and for which more information could be collected on children 18 months and older born to HIV+ women.

A total of 2,528 charts for all clients who came to these facilities during the specified periods were analyzed. Data were analyzed in two groups of clients, postpartum and abortion. The medical record forms were devised using the MCHI facility-based forms to monitor and evaluate changes in MCH practices. They were discussed with the HIV and AIDS experts and providers from maternities, hospitals, and gynecological units.

All research team members responsible for data collection from charts were informed of the HIV status of women and children because of their professional duties (Chart 3).

Chart 3. Sequence of extracting information from medical records in maternities, gynecological units, or regional HIV and AIDS centers.



PMTCT+FAMILY PLANNING

For this portion of the study, no consent was obtained from individual women to use these records because no personal identification was recorded, as is permitted by regional authorities and Russian laws.

Sample Design

The number of cities in each region included in the study depended on regional HIV prevalence. To calculate sample size, we estimated HIV and AIDS prevalence in the regions and the number of births and abortions according to the official data. The proposed sample size was discussed with regional representatives.

Records of approximately 2,600 postpartum and abortion clients was the minimum sample size needed to answer the study questions. A total sample of 2,528 charts of women who had delivery or abortion in the last three years was sought (250 charts from Primorsky Krai were not counted). In order to maximize the data collected on family planning and PMTCT practices, data from charts were analyzed in two groups of clients (postpartum and abortion) for the entire proposed period of the retrospective study (2002-2005). Almost all of the charts were fully and correctly completed, with some items missing in only a few of the charts. The distribution of charts by site and type of client is shown in Table 2.

In total, 470 women were invited to participate in interviews, and a total of 458 consented and completed interviews. There were 12 refusals to participate in the study. All other interviews were completed. The target of 700 interviews was an over-estimation of the actual number of women attending facilities for delivery or abortion during the period of the study. Fewer interviews were conducted than planned because of difficulties of the teams to organize interviews in remote places and because one of the nine regions failed to collect data at all.

In order to avoid ‘stigmatizing’ particular regions, the study did not aim to compare results from each region. In any case, the number of women interviewed in each region is too small to report results separately with adequate precision, and we report pooled data from all of the regions.

Table 2. Number of interviews conducted and charts reviewed by type of service and site

Region	CHARTS				INTERVIEWS			
	Postpartum clients	Abortion clients	Total N	Proposed	Postpartum clients	Abortion clients	Total N	Proposed
1. Altaysky krai	162	62	224	400	24	4	28	90
2. Irkutsk oblast	393	218	611	600	49	35	84	150
3. Khabarovsky Krai	39	34	73	80	5	6	11	28
4. Krasnoyarsky krai	145	130	275	220	25	25	50	60
5. Murmansk oblast	62	67	129	100	8	16	24	20
6. Orenburg oblast	252	231	483	400	50	31	81	100
7. Perm oblast	188	177	365	350	37	27	64	130
8. Primorsky Krai	-	-	-	250	-	-	-	50
9. Tyumen oblast	216	152	368	250	63	53	116	100
Total N	1457	1071	2528	2650	261	197	458	728

Study Instruments

The survey questionnaires, chart data extraction forms, and other study instruments were developed for the study by MCHI³ using questionnaires designed by the Women and Infant Health project (WIN project). These questionnaires were adapted for the purposes of this study with the assistance of JSI staff and consultations of regional representatives experienced in working in HIV and AIDS and with MCHI partners.

Two interview questionnaires were prepared: one for postpartum clients and another for abortion clients. The questionnaires had to be as simple as possible, to permit the cascade-type training of survey field staff.

Postpartum women were interviewed after delivery shortly before discharge from a maternity ward. Abortion clients were interviewed shortly before or immediately after abortion as was convenient for the woman.

Two forms for extraction of data from medical charts were developed: “Delivery Chart of the HIV-infected woman” and “Chart of the HIV+ woman admitted to the healthcare institution for abortion,” based on archive delivery and abortion records.

Both questionnaires and charts covered the following topics:

- Basic demographic and social characteristics
- Women's risk behaviors
- HIV and AIDS history
- HIV and AIDS testing, counseling, and care
- Fertility, abortion and other outcomes of pregnancy
- Contraceptive knowledge and use
- Information, education, and communication about family planning and health
- PMTCT, antenatal and delivery care, and infant care.

Many questions were similar for postpartum and abortion clients: socio-demographic characteristics, HIV history, HIV testing, counseling, and care, family planning, and PMTCT. There were some differences in questionnaires for postpartum and abortion clients. The abortion questionnaires collected more information about family planning, while the postpartum questionnaires collected more information about PMTCT. Both questionnaires were designed in order to limit interview time, since MCHI staff and regional experts agreed that the interview should not exceed 30 minutes for women after delivery and 20 minutes for women after abortion.

Questionnaires and study charts were pre-tested in the regions by the regional teams prior to launching the study. No needed changes were identified by the pre-test.

Codes were assigned to each facility to enable the survey coordinator to track interviews, forms completed, and refusals to participate. For data monitoring and analysis, every questionnaire and chart was assigned a number that was entered into the general listing of interviews conducted in each facility, and the facility code was also recorded on the questionnaire and chart form.

Other study materials included: research plans, interview tracking forms, contact list of regional research team members, list of regional health facilities included in the study, and interviewer's guide.

All study materials were printed in the sites in the week following the end of the training.

³ All the Study's materials are available upon request to MCHI. Maternal and Child Health Initiative, Koroviy Val str., 7, office 175, Moscow 119049 Russia, Tel. 7 (495) 937 3623, Fax 7 (495) 937 3680, www.jsi.ru
Maternal and Child Health Initiative

Field Implementation

At the end of April 2005 in Moscow, MCHI organized a two-day training course/workshop for regional supervisors from each regional research team. The goal of this training was to provide a general description of the study (purpose, methods, tools, timeline), to discuss organizational issues related to the study's arrangement, and to train them on how to retrieve the data from delivery and abortion medical records and how to interview HIV-infected women. This training also included filling out questionnaires and study charts, complying with confidentiality and ethical demands, coding, scheduling initial interviews and logistics, and training other members of the team to be familiar with the questionnaires and charts.

During the training course, additional clarifications and adjustments to the questionnaires were noted and discussed with all regional representatives during the final day of training. These changes were made to the questionnaires prior to final production.

After the training course, trained representatives conducted similar trainings in their respective regions for all the members of the regional research teams. Training courses for interviewers in each site were organized by the regional supervisors who attended the MCHI training in Moscow. Participants in these trainings were staff of the city health administration office and/or staff from affiliated research institutes. These field staff were responsible for interviewing and data entry and cleaning.

Each week, the MCHI study coordinator in Moscow evaluated the work of regional teams via telephone and e-mail. Regional supervisors sent monthly reports with numbers of charts and interviews completed and names of team members to the MCHI office. Codes were assigned to each facility to enable the survey coordinator and regional supervisors to track interviews completed.

Data were entered into either the regional statistical centers or Regional Health Administration offices. All study materials were kept in a safe, locked location available only to research team members. Data entry and cleaning was completed by January 31, 2006 and sent to the MCHI office for analysis.

Completed questionnaires, charts, and informed consent forms were shipped to Moscow headquarters after the end of the study.

Analysis

After review by the regional supervisors, the completed questionnaires and charts were entered into a computer database using the SPSS Data Entry program. Data were entered twice and files were compared to ensure the quality of the database. The final data files were cleaned and edited at MCHI headquarters in Moscow. When necessary, queries were sent to the regional offices where the original questionnaires were completed. The MCHI team in the Moscow office performed data analysis using the SPSS statistical analysis package.

Three types of indicators were calculated:

Key HIV and AIDS Indicators: HIV history, practice of HIV counseling, testing, care;

Key family planning Indicators reflecting sexual behavior: contraceptive preference, family planning counseling by health workers

Key PMTCT Indicators: PMTCT practices and counseling.

MCHI staff analyzed the data. The analyses in the following chapters are based on aggregated reports of individual respondents and provide estimated experiences of the average client in the entire network of health facilities. No analyses were performed that would enable identification of individual clients.

Ethical Aspects of the Study

All regional study team members were instructed regarding the importance of keeping the research information confidential. Standard requirements to obtain informed consent of women to be interviewed, with emphasis on voluntary participation in the survey, were applied to this research. Preliminary explanations on the goals and objectives of the study, as well as issues to be discussed, also reduced the likelihood that women would be surprised by questions and refuse to answer questions once the interview began.

Probable risk or discomfort due to participation in the study was minimal. There was no physical risk for any participant. Interviewed women may experience psychological discomfort while answering questions related to the themes to which they were sensitive, such as using drugs and HIV and AIDS. Several activities were carried out to reduce the risk of psychological discomfort. Interviewers were taught to ask questions about sensitive subjects, and an interviewer's guideline was developed. They were also trained on how to explain to the woman that she could terminate the interview at any time she wished to do so without indicating a reason. Women interviewers were used as another way to reduce psychological discomfort of the HIV+ women, and all interviews were conducted in the privacy of the healthcare institution.

Two copies of "Informed consent on inviting an interviewer" (Annex One) were given to the woman by the supervisor in the health facility. One copy is retained for the study file and the other was given to the woman. The informed consent form contained contact information for the study and researchers. The woman was informed that she could contact the Research Supervisor and/or the supervisor in the health facility if necessary and ask any questions related to the study. If she agreed to participate in the study, both she and the supervisor in the health facility signed these forms and the supervisor in the health facility invited an interviewer to do the interview.

Prior to the interview, the interviewer repeated information on conducting the study, voluntary participation, the benefits of participating in the study (e.g., increased knowledge), and possible unpleasant consequences of the interview (e.g., psychological discomfort and time). Women were assured that their participation or non-participation in the study and their responses during the interview would not have any impact on the quality of their health care. .

If the woman agreed to be interviewed, she and the interviewer signed two copies of "Informed consent on carrying out the survey," one of which was attached to her questionnaire and the other of which was kept by the woman (Annex Two).

W women were not offered any direct monetary reward to participate in the study. However, survey participants were able to increase their knowledge on prevention of unintended pregnancy and PMTCT. At the end of the interview, the woman was counseled and given educational materials relevant to family planning and PMTCT, as well as souvenirs provided by MCHI partner Gideon-Richter, a pharmaceutical company.

Data from interview

Demographic and Social Characteristics of HIV-positive Women

Our samples are described by major demographic characteristics in Table 3, which is grouped according to age, marital status, education, and employment status. HIV-positive women were between the ages 15-39, with the **mean age** at about 24. About half of women interviewed were between the ages of 21-24. There was no significant difference in age distribution between types of clients. All interviewed women said they are **permanent residents** in the regions of survey.

Table 3. Selected socioeconomic characteristics of the interviewed clients (%)

	Types of clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Age			
<21	20,7	14,7	18,1
21-24	43,3	47,2	45,0
>24	36,0	38,1	36,9
Mean age (years old)	23,75	24,12	23,91
Youngest (years old)	15	17	15
Oldest (years old)	39	36	39
Less than complete secondary education	16,1	10,2	13,5
Complete secondary	74,3	81,7	77,5
More than secondary	9,6	7,6	8,7
No answer	0	0,5	0,2
Had permanent employment	34,5	38,6	36,2
No employment	65,5	60,4	63,5
Difficult to say	0	1,0	0,4
Married	53,6	45,2	50,0
Divorced, widow, not married or alone	32,2	45,7	38,0
Other	14,2	8,6	11,8
Difficult to say	0	0,5	0,2
Regular partner	86,2	77,7	82,5
No constant partner	12,6	20,8	16,2
Difficult to say	0,8	0	0,4
No answer	0,4	1,5	0,9

Most of the women in the survey sample had completed secondary school (more than 70%). **Levels of education** were comparable across the two groups of clients.

There was also no difference in **employment status** between postpartum and abortion clients, with less than 40% of clients in both groups holding a permanent job.

The proportion of **currently married** women (in formal union) ranged from 54% of postpartum clients to 45% of abortion clients. Only half of the total number of women were officially married. Significantly more women confirmed that they had a regular partner: 86% of postpartum clients and about 78% of abortion clients.

HIV History and Health Service

The data from the interviews demonstrate that postpartum and abortion clients had similar HIV and AIDS histories. Most of the postpartum and abortion clients interviewed were **identified as**

PMTCT+FAMILY PLANNING

HIV+ in 2005 (40% and 19%, respectively). However, significantly more abortion clients knew their **HIV+** status earlier than 2005 (78%) compared with postpartum clients (57%) (Table 4).

Table 4. Year when HIV+ status was revealed and reasons for HIV-testing (%)

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total (n=458)
Year HIV status was discovered			
2005	40,2	19,3	31,2
2004	15,7	14,2	15,1
2003	6,9	12,7	9,4
2002	9,2	16,8	12,4
2001	9,6	13,7	11,4
2000	11,9	14,7	13,1
1999 and before	3,4	5,5	4,3
Difficult to say	3,1	3,0	3,1
Reasons for testing			
Personal wish before this pregnancy	10,7	10,2	10,5
Medical examination before this pregnancy	9,2	14,7	11,6
Antenatal screening at present pregnancy	42,9	12,7	29,9
In the maternity at current or previous or soon after current or previous delivery	5,7	5,1	5,5
Antenatal screening at previous pregnancy	14,9	23,4	18,6
Partner's contacts testing	6,1	19,8	12,0
Narcological clinic	2,3	3,0	2,6
Other	6,5	7,1	6,8
No answer	0,8	2,5	1,5
Difficult to say	0,8	1,5	1,1

The most common situation in which women learned of their **HIV+** status was testing at antenatal screening: 58% of postpartum clients (43% of them at current pregnancy, 15% at previous pregnancy) and 36% of abortion clients (13% of them at current pregnancy, 23% at previous pregnancy) (Table 4). Other situations in which **HIV+** status was identified were: **HIV+** testing of partners (6% of postpartum, 20% of abortion clients); personal wish to be tested (11% and 10% respectively); medical examination (9% and 15% respectively); at present or previous deliveries (6% and 5% respectively), and in rare cases, in prisons, narcological units, and during routine professional medical examinations (Table 4).

More than half of women said they were infected by **HIV** because of sexual contact (58% as a total). About 30% reported contracting **HIV** because of injecting drug use. About 14% of postpartum and abortion clients had difficulty answering how they contracted **HIV** (Table 5).

Table 5. Percent of women reporting on specific source of HIV infection

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Sexual contact	54,0	62,4	57,6
IDU-using	30,7	33,0	31,7
Other	0,4	0,6	0,5
Difficult to say	13,8	2,0	8,7
No answer	1,1	2,0	1,5

PMTCT+FAMILY PLANNING

We asked women about testing and counseling practices. Counseling before testing occurred in 34,1% of postpartum clients and 33,5% of abortion clients, after testing for 87% and 90,9% respectively. Eleven percent of women in both groups said they didn't know they were tested (Table 6). Only about one-third of women in both groups had complete counseling before and after HIV testing according to the National PMTCT Guidelines.

Table 6. HIV screening and counseling practices (%)

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Informed before test	82,4	85,8	83,8
Wasn't informed about HIV testing	11,1	11,2	11,1
Difficult to say	6,5	3,0	5,1
Counseling before testing	34,1	33,5	33,8
No counseling before testing	59,8	62,4	60,9
Difficult to say	6,1	4,0	5,3
Counseling after testing	87,0	90,9	88,6
No counseling after testing	9,6	5,6	7,9
Difficult to say	3,4	3,5	3,5
Counseling before and after testing	33,3	33,0	33,2

Usual place where health care was obtained

Most of the women interviewed attended **women's consultation centers** and **HIV and AIDS centers** (Table 7). Seventy-five percent of postpartum and 92% of abortion clients attended an HIV and AIDS center, and about 80% of total clients had some care in HIV and AIDS centers. Considerably more postpartum clients in comparison with abortion clients didn't have care in HIV and AIDS centers (21% and 6% respectively). Otherwise, significantly fewer abortion clients had care in women's consultations in comparison with postpartum clients (78% and 47%, respectively).

The **reasons for not using antenatal care** for 64 postpartum clients who did not attend antenatal care were: did not want it - 18%; transport costs - 10%; did not like care in women consultation - 7%; consultation located far from home - 7%. In a few cases, the reasons included no residence, no coverage by health insurance, or prefer HIV/AIDS center. Nineteen percent of postpartum clients had difficulty answering why they did not have antenatal care; 9% gave no answer to this question.

Table 7. Percent distribution of the sample by type of care in HIV/AIDS center and women's consultation

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
HIV/AIDS center			
Attendance	75,5	92,4	82,8
No attendance	21,5	5,6	14,6
No answer	3,1	2,0	2,6
Women's consultations			
Attendance	78,2	46,7	64,6
No attendance	21,5	50,3	33,8
No answer	0,3	3,0	1,6

PMTCT+FAMILY PLANNING

Both abortion and postpartum clients attending HIV/AIDS centers were satisfied with the health care provided (94% and 92%, respectively) (Table 8).

Table 8. Client perception of HIV/AIDS centers (%)

	Type of interviewed clients		
	Postpartum clients (n=197)	Abortion clients (n=182)	Total clients (n=379)
Satisfied with care	92,4	93,9	93,1
Not satisfied with care	3,6	2,8	3,2
No answer	1,0	0,6	0,8
Difficult to say	3,0	2,8	2,9

Most women were satisfied with health care in women’s consultation centers (81% of total clients) (Table 9).

Table 9. Client perception of antenatal care in women’s consultations (%)

	Type of interviewed clients		
	Postpartum clients (n=204)	Abortion clients (n=92)	Total clients (n=296)
Satisfied with care	80,9	81,6	81,1
Not satisfied	13,2	9,2	11,9
No answer	1,0	5,1	2,3
Difficult to say	4,9	4,1	4,6

About 18% of postpartum clients and 8% of abortion clients experienced **stigmatization in women consultation** (Table 10). Seventy percent of abortion clients preferred to attend a gynecologist in an HIV/AIDS center for their current pregnancy.

Table 10. Client perception of antenatal care (%)

	Type of interviewed clients		
	Postpartum clients (n=204)	Abortion clients (n=92)	Total clients
Felt Stigmatized	17,9	8,3	13,1
Did not feel stigmatized	71,2	89,1	80,1
No answer	4,7	0	2,4
Difficult to say	6,2	2,6	4,4

Eighty four percent of postpartum clients were **satisfied with health care in maternities** (Table 11). However, almost 15% met stigmatization there. Seventy seven percent would recommend the maternity to a friend, 10% would not recommend it, 5% of postpartum clients said there is no choice for them, and 7% had difficulties answering.

Eighty three percent of abortion clients were satisfied with health care in **gynecological departments**, 8% were not satisfied, and 9% had difficulty answering. Ten percent experienced stigmatization at the facility (Table 11). Most of the women (74%) would recommend this institution to a friend in a similar situation, 4% said there is no choice for them, and 14% couldn’t answer.

Table 11. Client perception of gynecological unit and maternity (%)

	Type of interviewed clients	
	Postpartum clients (n=261) Maternity	Abortion clients (n=197) Gynecological Unit
Satisfied with health care	83,9	82,7
No satisfied	8,8	7,6
No answer	0,8	1,0
Difficult to say	6,5	8,6
Recommended to a friend	77,4	73,6
Don't recommend	10,0	7,6
Don't have a choice	4,6	3,6
No answer	0,8	1,5
Difficult to say	7,3	13,7
Stigmatized	14,9	10,2
No stigmatization	81,2	87,8
No answer	0	1,0
Difficult to say	3,8	1,0

The most **comfortable place to get gynecological care** or counseling reported by postpartum and abortion clients was the HIV/AIDS center (65% and 74%, respectively), followed by women's consultations (52% of postpartum and 39% of abortion clients) (Table 12). Less than 8% of all clients mentioned private clinics.

Table 12. Percent distribution of the sample by preference of the facilities for care

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Women's consultation	52,5	38,6	46,5
HIV/AIDS center	65,1	73,6	68,8
Private doctor	8,8	5,1	7,2
Other	2,7	1,0	2,0

Key findings

- Information obtained from women confirmed the fact that the HIV epidemic in Russia is spreading among the general population due to heterosexual contact (58% of clients), in contrast to the first years of the epidemic, when 90% of HIV+ cases were injecting drug users.
- Currently, most newly-pregnant women do not know their HIV-status. Women most commonly learn of their HIV status at antenatal screening (58% of postpartum clients and 36% of abortion clients), and only in a few cases do women learn because they personally ask to be tested (11% and 10%, respectively).
- In just one-third of cases there was complete counseling before and after testing, and 11% of women did not know they were tested.
- Despite the fact that most women expressed satisfaction with care provided in women's consultations, maternities, and gynecological departments, some felt stigmatized (18% of postpartum clients during antenatal care, 15% in maternities, and 10% in gynecological units). Probably because of expected stigmatization in health facilities, the HIV/AIDS center is reported as the most preferable place for care for HIV+ women (about 70% of women).

PMTCT+FAMILY PLANNING

- Very few women coming for delivery and abortion in 2005 identified their HIV-status seven years ago or earlier (4% of all clients). Most had known their HIV+ status for no more than 3-4 years.

Fertility History and Family Planning

Fertility history

The survey collected a history of women's pregnancies and their outcomes – live births, abortions, miscarriages, and still births (Table 13-14).

Most women interviewed **had at least one previous pregnancy**: 65% of postpartum clients and 83% of abortion clients (Table 13). The mean number of pregnancies was 2.0 for postpartum clients and 2.7 for abortion clients.

Table 13. Proportion of women had previous pregnancy (%)

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Had previous pregnancies	65,1	83,2	72,9
No previous pregnancies	34,9	16,8	27,1
Mean number of previous pregnancies	2,0	2,7	2,3

Previous pregnancies ending in a live birth occurred in 30.6% of cases, in abortions in 60.5%, and in stillbirth in 9.8%. About 74% of clients in both groups **previously had an abortion**. Mean number of abortion per women was about 2 (Table 14). Twenty-three percent of abortion clients had a previous abortion less than 12 months ago.

Forty-three percent of postpartum and 74% of abortion clients had a previous live birth (Table 14). About 30% of postpartum and 13% of abortion clients had two or more live births.

Table 14. Percent distribution of previous abortions, miscarriages, or still births

	Type of interviewed clients		
	Postpartum clients (n=170)	Abortion clients (n=164)	Total clients (n=334)
Previous abortion	74,7	72,0	73,4
No previous abortion	25,3	27,4	26,3
No answer	0	0,6	0,3
Mean number of previous abortions	1,6	2,2	1,9
Had at least one live birth	43,5	73,8	58,4
No previous deliveries	56,5	25,0	41,0
Refusal to answer	0	1,2	0,6
Previous miscarriage or still birth	20,6	17,8	19,2
No previous miscarriage or still birth	78,8	81,0	79,9
No answer	0,6	1,2	0,9

Previous **miscarriages or still births** were reported by about 20% of women, with no significant difference between types of clients (Table 14).

Previous experience in family planning

About 34% of postpartum clients and 19% of abortion clients confirmed no **previous contraceptive counseling** by a health provide r– more than one-quarter of all HIV+ clients (Table 15).

Table 15. Percentage of women counseled on family planning by health workers before the current pregnancy

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Counseled	65,8	78,6	71,3
Was not counseled	33,8	18,9	27,4
No answer	0	0	0
Difficult to say	0,4	2,6	1,3

More than half of postpartum clients (54%) and almost all abortion clients (94%) said that the current **pregnancy was unintended**, with only 44% of postpartum and 6% of abortion clients reporting that the current pregnancy was planned (Table 16).

About 60% of postpartum and 95% of abortion clients whose pregnancy was unintended were not counseled on family planning before the current pregnancy.

A comparison of abortion clients counseled and not counseled on family planning demonstrated that the pregnancy was unintended in 78% of counseled clients and in 94% of non-counseled abortion clients. Only a minor number of abortion clients reported an intended pregnancy (difference is not significant, $p=0,82$).

Table 16. Percentage of women who planned the current pregnancy

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Pregnancy was planned	44,4	6,1	27,9
Wasn't planned	54,4	93,9	71,4
No answer	0	0	0
Difficult to say	1,1	0	0,7

Only 32% of postpartum and 59% of abortion clients **used a contraceptive method during the 12 months before this pregnancy** (Table 17). Forty percent of abortion clients, most of whom, as we have seen, did not intend to get pregnant, used no contraception prior to this pregnancy.

Table 17. Percentage of clients who used contraception during the last 12 months before getting pregnant

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Used contraception during the last 12 months	32,3	58,9	43,8
Did not use contraception	66,9	40,1	55,4
No answer	0	0,5	0,2
Difficult to say	0,8	1,0	0,9

Women who did not use any method of family planning in the 12 months prior to the pregnancy were asked their **reason for not using a method** (Table 18). Among non-users, the two main reasons given were that she wanted to get pregnant (43% of postpartum and 14% of abortion clients) and that she did not like to use a contraceptive method (18% and 17%, respectively). Few women said they did not use contraception because they could not afford it, had rare sexual intercourse, were afraid of side effects, had a partner against it, or had problems with fertility. A comparatively large number of clients (16%) had difficulty answering this question.

Table 18. Reasons for non-use contraception during last 12 months before getting pregnant (%)

	Type of interviewed clients		
	Postpartum clients (n=173)	Abortion clients (n=81)	Total clients (n=254)
Wanted to get pregnant	42,8	13,6	33,5
Didn't like to use	17,9	17,3	17,7
Too expensive	1,2	7,4	3,1
Partner objects	3,5	7,4	4,7
Fear of side effects	3,5	7,4	4,7
Rarely sexual active	4,0	8,6	5,5
Other	11,1	14,8	7,5
No answer	2,9	2,5	2,8
Difficult to say	13,3	21,0	15,7

The most **common sources of information** about contraceptive methods (Table 19) was a health worker (from any health institution except HIV/AIDS center) (42% of postpartum clients and 52% of abortion clients), a friend (55% and 41%, respectively), TV (35% and 25%, respectively), HIV/AIDS Center (26% and 39%, respectively), relatives (34% and 25%, respectively), and newspapers or journals (29% and 34%, respectively). Less frequently mentioned were manufacturers' advertising (15% and 16%, respectively), pharmacies (14% and 20%, respectively), and radio programs (12% and 4%, respectively). A few respondents said that they received information in schools.

Table 19. Source of information on contraceptive methods for women who used any contraception during the last 12 months before getting pregnant (%)

	Type of interviewed clients		
	Postpartum clients (n=86)	Abortion clients (n=118)	Total clients (n=204)
Health worker in any institution	41,9	52,5	48,0
Friend	54,7	41,5	47,1
Television	34,9	25,4	29,4
HIV/AIDS Center	25,6	39,0	33,3
Newspaper	29,1	33,9	31,9
Relatives	33,7	24,6	28,4
Pharmacy	14,0	19,5	17,2
Advertising booklet	15,1	16,1	15,7
Partner	15,1	10,2	12,3
Radio	11,6	4,2	7,4

Fifteen percent of postpartum and 10% of abortion clients said a partner was a source of information about contraceptive method. About 53% of postpartum and 60% of abortion clients **discussed family planning methods with a partner** (Table 20).

Table 20. Percentage of clients previously discussed contraception with a partner

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Discussed contraception	52,9	59,5	55,7
Did not discuss contraception	46,0	35,8	41,7
No answer	0,4	2,1	1,1
Difficult to say	0,8	2,6	1,6

Immediately before this pregnancy, only 25% of postpartum clients and 35% of abortion clients used a contraceptive method (Table 21). Almost 57% of postpartum and 89% of abortion clients said they got pregnant despite using a family planning method.

Table 21. Percentage of clients who used contraception immediately before current pregnancy and got pregnant while using the method

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Used a contraceptive method immediately prior current pregnancy	25,3	35,5	25,7
Didn't use contraception	74,2	62,4	73,2
No answer or difficult to say	0,5	2,0	1,1
Of those who used a method (n):	N=49	N=74	N=122
Got pregnant while using the method	57,1	89,2	76,4

Condoms were the most commonly used contraceptive method **immediately before current pregnancy** (80% of postpartum and 70% of abortion clients) (Table 22). Less often mentioned were hormonal pills (16% and 15% of clients, respectively). Natural methods were cited by 12% of postpartum and 22% of abortion clients, respectively. Fewer than 5% of both types of clients reported other barrier methods (spermicides, diaphragm), emergency contraception, or IUD.

Table 22. Percentage of respondents who used a contraceptive method immediately prior current pregnancy, by type of method used

	Clients using a contraceptive method		
	Postpartum clients (n=49)	Abortion clients (n=74)	Total clients (n=122)
Condoms	79,6	69,9	73,8
Traditional methods	12,2	21,9	18,0
Hormonal birth control pills	16,3	15,1	15,6
Injection contraceptive	0	0	0
Intrauterine device	0	2,7	1,6
Emergency contraception	0	4,1	2,5
Other method	6,1	2,8	0,8

Current family planning practices in health facilities

About half of all clients reported that they **did not want any children in the future**. 18% of postpartum and 41% of abortion clients said they want to have children in the future. About 15% of clients hadn't decided yet (Table 23).

Table 23. Percentage distribution of respondents by desire for future children.

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Do not want more children	64,4	42,7	55,2
Want a child in future	18,4	41,1	28,0
Difficult to say	16,5	15,1	15,9
No answer	0,8	1,0	0,9

Only about half of women **were advised to use** contraceptive methods while **in the maternity** after current delivery or **gynecological unit** after current abortion (Table 24). About one third of the women said they need **additional counseling on family planning**.

Table 24. Percentage of women advised to use a contraceptive method while in the maternity or abortion clinic

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Advised to use contraception	48,7	67,0	56,4
Wasn't advised	49,8	31,9	42,3
No answer	0	0	0
Difficult to say	1,5	1,0	1,3
Need additional counseling on family planning	29,5	32,3	30,7
Didn't need additional counseling on family planning	67,8	65,1	66,7
No answer	0,4	0,5	0,4
Difficult to say	2,3	2,1	2,2

The most often advised methods of contraception by the maternities and gynecological departments were condoms (66% and 74%, respectively), hormonal pills (58% and 63%, respectively), intrauterine devices (34% and 44%, respectively), and injectable contraceptives (8% and 25%, respectively) (Table 25). Less than 10% of women mentioned that other contraceptive methods were mentioned, such as emergency contraception, other barrier methods, and sterilization.

Table 25. Percent distribution by method family planning method advised in this institution

	Type of interviewed clients		
	Postpartum clients (n=127)	Abortion clients (n=132)	Total clients (n=259)
Condoms	65,6	73,8	69,7
Hormonal birth control pills	58,1	63,1	60,6
Intrauterine device	34,4	43,8	39,1
Injectable contraceptive	7,6	25,4	16,5
Emergency contraception	6,2	7,7	6,9
Sterilization	6,1	5,4	5,8
Other barrier methods	6,1	3,8	5,0
Traditional methods	0,8	0,8	0,8
Dual protection (condom and a medical method)	19,7	50,8	45,9

Among HIV+ abortion clients, only 13% were **provided with a contraceptive method** in gynecological department and only 2% of postpartum clients received a method in the maternity (Table 26).

Table 26. Percent distribution by clients provided with contraceptive methods in maternity or abortion clinic

	Type of interviewed clients		
	Postpartum clients (n=127)	Abortion clients (n=132)	Total clients (n=259)
Provided with method	2,3	12,9	7,6
Was not provided with method	95,5	84,1	89,8
Difficult to say	2,3	3,0	2,7

PMTCT+FAMILY PLANNING

Only 5% of postpartum and 1% of abortion clients said a **partner participated** in family planning counseling in the maternity or gynecological department (Table 27).

Table 27. Percentage of clients whose partners participated in family planning counseling in this institution

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Partners participated	5,0	1,0	3,3
Didn't participate	93,1	97,4	94,9
No answer	0,4	0	0,2
Difficult to say	1,5	1,6	1,5

Despite the fact that most women were previously counseled on family planning and about half of women were advised to use contraception in the institutions, only about a quarter of clients gave a **correct answer when asked when they can get pregnant after delivery or abortion**--about 30% gave a wrong answer (Table 28). About half of women (46% of postpartum and 38% of abortion clients) said they did not know when fertility returns.

Table 28. Percentage of distribution by respondents' answers when fertility returns after abortion or delivery

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Right answer	26,8	29,7	28,0
Wrong answer	26,1	32,3	28,7
Difficult to answer	46,4	38,0	42,8
No answer	0,8	0	0,4

Most women interviewed said they intended to use contraception after current pregnancy: 91.2% of **postpartum clients** and 93.2% of **abortion clients** (Table 29).

Table 29. Percentage of respondents distributed by their plans to use family planning methods

	Type of clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Intend to use method after this pregnancy	91,2	93,3	92,1
Do not intend to use	3,1	4,7	3,8
No answer	0	1,0	0,4
Difficult to say	5,7	1,0	3,8

Family planning

Condoms were the most common method that both type of clients (50% of postpartum and 52% of abortion clients) intend to use; 29% and 35% of clients, respectively, intend to use hormonal pills; and 33% and 33%, respectively, intend to use IUD (Table 30). Only 25% of clients were planning to use dual method. Other methods were mentioned by less than 10% of clients. However, 9% of postpartum and abortion clients intend to use natural family planning ('safe period' method).

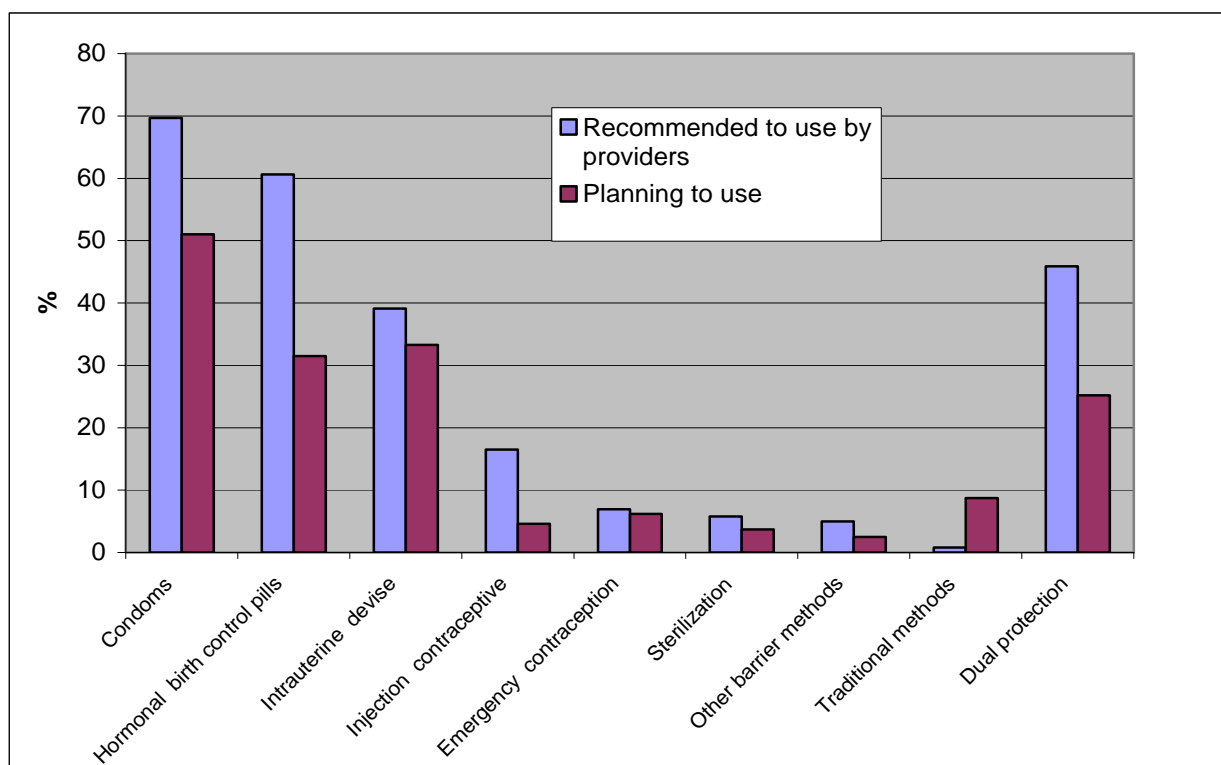
Table 30. Percentage of respondent planning to use a contraceptive method after current pregnancy by chosen method

	Type of clients		
	Postpartum clients (n=238)	Abortion clients (n=179)	Total clients (n=417)
Condoms	50,2	52,2	51,0
Hormonal birth control pills	28,9	35,2	31,5
Intrauterine device	33,2	33,5	33,3
Injectable contraceptive	4,0	5,5	4,6
Emergency contraception	5,5	7,1	6,2
Sterilization	4,7	2,2	3,7
Other barrier methods	2,0	3,3	2,5
Traditional methods	8,7	8,8	8,7
Dual protection (condom and a medical method)	20,6	31,3	25,2
No answer	0	0	0
Difficult to say	7,9	6,5	7,6

Note: The percentages in Table 30 add to more than 100% because women were permitted to give more than one answer to this question.

The distribution of the methods that women reported they planned to use was quite similar to distribution of the methods those advised to use by health workers (Chart 4), except natural methods, which are not advised by providers. A disturbing finding is that 9% of women were planning to use traditional, less effective method than medical methods. Further, only one-quarter of these women intended to use effective methods to prevent unplanned pregnancy and STI dual protection.

Chart 4. Comparison of family planning methods advised using by providers and planning to use by clients after current pregnancy



PMTCT+FAMILY PLANNING

The most **respected source for family planning information** for postpartum and abortion clients were health workers – 65% and 56% of clients respectively. Clients of both interviewed groups respect information provided by HIV/AIDS centers – 33% and 50% respectively; opinions of relatives were cited by 24% and 21% of clients, respectively; and partners were mentioned as a source of information by 23% and 19% of clients, respectively (Table 31). Friends' opinions (one of the main source of information about previously used contraception method) were respected by 16% of postpartum and 3% of abortion clients. Nine percent of postpartum and 15% of abortion clients believe in printed information in health facilities. Not more than 10% of women mentioned popular books and booklets, newspapers or journals, TV, pharmacies, NGOs, radio programs, and the Internet (more than one answer was permitted, so percentages add to more than 100%).

Table 31. Most important source of information about receiving family planning information

	Type of clients		
	Postpartum clients (n=238)	Abortion clients (n=179)	Total clients (n=417)
Health workers	64,8	55,8	60,9
Information in HIV/AIDS Center	33,0	49,7	40,2
Relatives	24,5	20,8	22,9
Partner	22,6	18,8	21,0
Printed information in health institution	8,8	15,2	11,6
Friend	16,1	3,0	10,5
Information in pharmacy	7,7	10,7	9,0
Popular books and booklets	8,0	12,7	10,0
Newspaper	6,5	5,6	6,1
Radio, TV	11,1	8,6	10,1
Other	4,2	3,5	0,9

Women were not satisfied with previous sources of information about family planning. After delivery or abortion, more women wanted to obtain their information about contraception from health workers (Chart 5).

The **most convenient place to get information about family planning** for women were HIV/AIDS centers – 63% of postpartum and 76% of abortion clients; women consultation's – 50% and 40%, respectively; maternities – 23% and 3%, respectively; and pharmacies – 7% and 13%, respectively (Table 32). Less often mentioned were home, by phone, from an NGO, and in a private institution. (More than one answer was permitted.)

Chart 5. Comparison of family planning informative sources used previously and wanted to use in the future

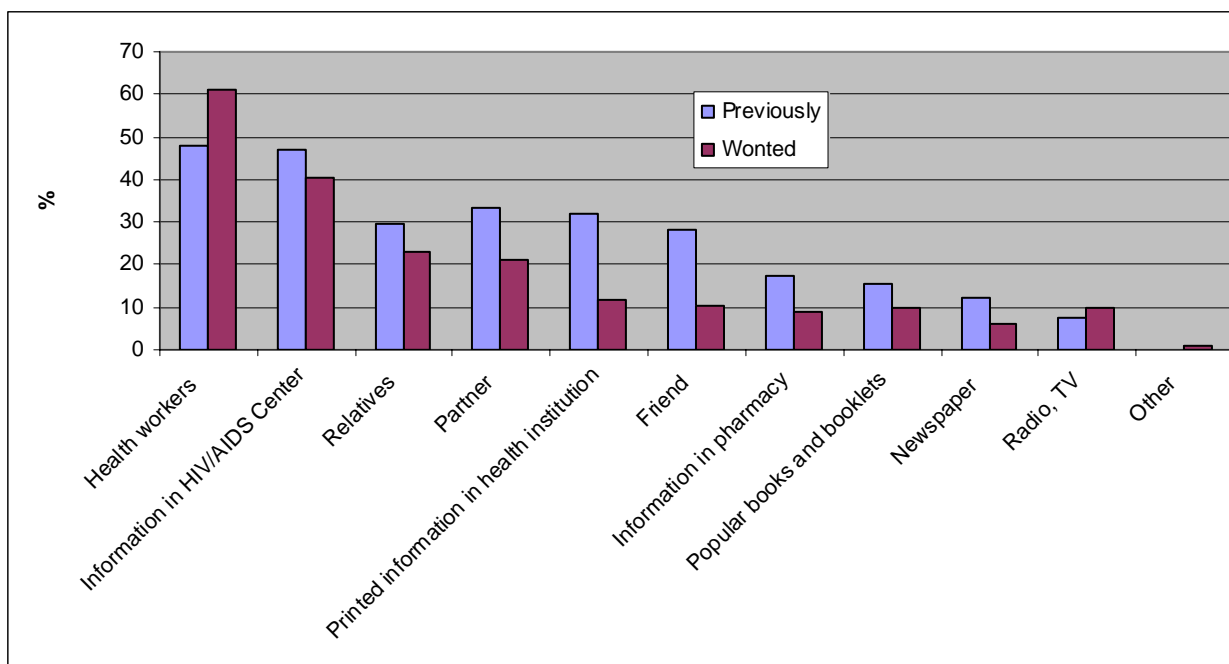


Table 32. Best place for clients to receive family planning information

	Type of clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
HIV/AIDS center	63,2	75,6	68,6
Women consultation	50,2	39,6	45,6
At the maternity	22,6	3,0	14,2
Pharmacy	7,3	12,8	9,6
At home	7,7	6,6	7,2
Hotline	6,5	9,1	7,6
NGO	6,5	6,1	6,3
Private medical institution	5,0	7,1	5,9
Other	2,7	2,5	2,6

About half of postpartum clients and abortion clients said they **knew other HIV+ women** (Table 33), and the same proportion of women said that they **discuss family planning with friends**.

Table 33. Percentage of respondents knowing other HIV+ women and percent sharing information with friends on family planning

	Type of clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Who know other HIV positive women	46,0	53,3	49,1
Didn't know	48,3	35,5	42,8
No answer	3,1	9,6	5,9
Difficult to say	2,7	1,5	2,2
Who shares information about family planning with other women	49,6	52,8	51,0
Didn't share information about family planning with other women	48,1	42,1	45,5
No answer	1,2	2,5	1,8
Difficult to say	1,2	2,5	1,8

Key findings

- Despite the fact that about 70% percent of clients were previously counseled on family planning by health workers, and that almost all abortion clients and half of postpartum clients did not plan the current pregnancy, less than half of clients used some method of contraception in the year prior to the pregnancy.
- For abortion clients, the main reason for not using contraception was that they didn't like to use contraception (17%), but almost 21% had difficulty to answer why they didn't use contraception.
- The data demonstrate that counseling did not prevent unintended pregnancies. About 80% of abortion clients were counseled before the pregnancy by health workers, but only 6% intended to become pregnant.
- The two family planning methods that failed most frequently were condoms (74% of clients) and traditional methods (18%).
- Although more than half of the women interviewed wanted no more children and almost all were going to use contraception after the current delivery or abortion, only half of these women were counseled on family planning by health workers. After delivery or abortion, about 60% of clients didn't know when fertility returns or gave a wrong answer. One-third of women said they need additional counseling on family planning.
- Very few women reported that they were counseled to use emergency contraception if they failed to use their preferred family planning method or thought that it failed. Less than 7% of women mentioned that health providers counseled regarding use of emergency contraception and 6% were going to use the method.
- In general, the distribution of the methods that women said they were going to use was quite similar to those advised to use contraception by health providers, but women reported intention to use much less that it was advised. Only 30% of women said they going to use dual methods of protection.
- Among counseled HIV+ abortion clients, only 13% were provided with a contraceptive method in gynecological departments and only 2% of postpartum clients received a method in maternities.
- Respondents preferred to obtain their information about family planning in HIV/AIDS centers (about 70% of total clients), women's consultations (46% of total clients), and

PMTCT+FAMILY PLANNING

maternities (23% of postpartum clients). More than half of the women in both groups (65% of postpartum and 56% of abortion clients) considered health workers the most important source of information about contraception.

- About 20% of the women said they respect their partner's opinion (most women had a constant partner) and more than half discussed contraception with a partner, but only in a few cases did partners participate in family planning counseling in health facilities.

PMTCT

Counseling of pregnant women

Most of the 261 postpartum and 197 abortion clients interviewed reported that they were counseled on PMTCT by health workers (88% of postpartum and 87% of abortion clients) (Table 34). Most often, HIV+ women reported that they received this counseling in an HIV/AIDS center (85% of postpartum and 76% of abortion clients). Fewer reported receiving counseling in a women's consultation (30% and 16% respectively) and in a maternity hospital (42% and 3%). In rare cases they were counseled in a gynecological department, or in polyclinics or other hospital settings (a few reported counseling in blood donation units or by an NGO) (Table 35). About 11% of clients had never been counseled on PMTCT.

Table 34. Percentage of respondents counseled on PMTCT

	Type of interviewed clients		
	Postpartum clients (n=261)	Abortion clients (n=197)	Total clients (n=458)
Were counseled on PMTCT	88,4	86,8	87,7
Weren't counseled	10,9	10,2	10,5
No answer	0,8	2,5	0,9

Table 35. Percentage of respondents counseled on PMTCT by location of counseling

	Type of interviewed clients		
	Postpartum clients (n=231)	Abortion clients (n=172)	Total clients (n=403)
Women's consultation	29,9	15,7	14,1
In (this) maternity	37,2	n/a	37,2
In any other maternity	5,2	2,9	4,7
HIV/AIDS center	85,3	76,2	81,9
No answer	0	1,7	0,7
Other	9,6	3,5	7,2

Note: The percentages in Table 35 add to more than 100% because women were permitted to give more than one answer to this question.

All postpartum clients were asked to name the PMTCT methods. Most gave **correct answers** on the main ways to prevent MTCT (Table 36): 89% said to take ARVs during pregnancy, 84% said take ARV during delivery, and 90% knew that ARV should be given to the newborn. Ninety percent mentioned provision of artificial feeding. However, only 47% were counseled on the safest mode of delivery and even fewer knew that Cesarean section is a method of prevention of maternal to child transmission of HIV.

Postpartum clients were asked if they knew their HIV status at this pregnancy, and in which week of pregnancy they learned their status. Almost all (except 3.4% those who had difficulty to answer and 0.8% who missed this question) said they were identified as HIV+ at the 28th week of pregnancy or earlier. According to the new National PMTCT Standards, ARV treatment

PMTCT+FAMILY PLANNING

should start at the 28th week of pregnancy, so this finding shows that it was possible to start ARV prophylaxis for PMTCT on time for the vast majority of these women.

Table 36. Percentage of postpartum clients counseled on PMTCT and percent of postpartum clients who gave correct answers on PMTCT methods

PMTCT	Counseled on PMTCT (n=261)	Correct answers on PMTCT (n=261)
ARV during pregnancy	79,7	88,8
No	16,9	0,8
No answer	0,8	0,8
Difficult to say	2,7	9,6
ARV in delivery	85,4	83,5
No	12,6	1,5
No answer	0,4	0,8
Difficult to say	1,5	14,2
Mode of delivery	47,1	35,0
No	49	21,2
No answer	0,4	0,8
Difficult to say	4,4	43,1
ARV to a child	93,4	90,3
No	5,4	2,3
No answer	0	0,4
Difficult to say	1,2	6,9
Child artificial feeding	96,6	93,5
No	3,1	1,5
No answer	0	0,8
Difficult to say	0,4	4,2
Four correct answers: ARV during pregnancy, births, to a child, formula feeding	77,2	76,6
All 5 correct answers: ARV during pregnancy, births, to a child, formula feeding +cesarean section	3,9	31,4

Care received during pregnancy

As mentioned earlier, most postpartum women reported that they had attended health institutions during this pregnancy: 75% attended HIV/AIDS centers, 78% attended women’s consultations (Table 37), and the same percentage of postpartum clients attended both these institutions. Sixty-nine percent of clients attended each health institution four or more times during current pregnancy.

Table 37. Percent of interviewed postpartum clients with regular attendance of HIV/AIDS centers and women's consultations during current pregnancy

	Postpartum clients attended HIV/AIDS center	Postpartum clients attended women's consultation
Postpartum clients attended the health institutions(n=261)	75,5	78,2
	69	
	n=197	n=204
Less than 4 times	19,3	11,6
4 times and more	76,7	70,3
Difficult to say	1,0	13,9
No answer	3,0	4,2

Although the percentage of women receiving some ARV prophylaxis was comparatively high, the **complete ARV course was provided only to 68% of mother-infant pairs** (Table 38).

The data in Table 38 show that 74% of women reported receiving ARV during pregnancy. It is the lowest rate of ARV for PMTCT among other types of ARV-prophylaxis.

Table 38. Percent of interviewed postpartum clients that received ARV during pregnancy, in labor, and child received ARV after birth

	Postpartum clients (n=261)
ARV during this pregnancy	73,9
No ARV	24,5
No answer	1,5
Difficult to say	0
ARV in labor	87,0
No ARV	10,7
No answer	0,4
Difficult to say	1,9
ARV to a child received	90,8
No ARV to a child	2,3
No answer	0
Difficult to say	6,9
Couples received all 3 ways of ARV	66,7
Couples didn't received any of ARV	1,5

About 90% of them took ARV regularly during pregnancy (Table 39). Clients' answers on regularity of taking medicine may not be sufficient to evaluate adherence to ARV, but the answers at least suggest that the women understand the need to take ARV regularly.

Table 39. Percent of postpartum clients distributed by regularity of taking ARV in pregnancy⁴

	Postpartum clients (n=197)
Received as recommended	86,8
Missed episodically	8,1
Missed more than half	2,0
Other	1,0
Difficult to say	2,0

⁴ Percent of postpartum clients distributed by regularity of taking ARV during pregnancy with an n=197 but not 192. is the difference in sample size is because four women gave "No answer" to the question presented in the Table 39, but then answered the next questions presented in the Table 40.

PMTCT+FAMILY PLANNING

Only half of these women started to take ARV at 21- 28 weeks of pregnancy; and almost 30% started only at week 29 or later (Table 40). Another 20% reported beginning ARV prophylaxis at 14-20 weeks. According to the previous Russian Guidelines #606 (2003), ARV during pregnancy should begin at the 14th week of pregnancy. According to the National PMTCT Standard #612 ARV should start at the 28th week of pregnancy. The study was conducted between May and October of 2005, and the new PMTCT Standard was announced in June 2005. This may be one reason that there is a difference in time of starting ARV. Still, almost 30% started ARVs at the 29th week of pregnancy or later, despite the fact that almost all women had already known HIV+ status at the 28th week of pregnancy or earlier (of those who had ARV during pregnancy).

Table 40. Percent of postpartum clients who started ARV during pregnancy by specific week of pregnancy ARV started

Week of pregnancy	Postpartum clients (n=197)
Before 20 weeks	18,8
20-28 weeks	49,2
29 week and later	29,5
No answer	1,5
Difficult to say	1,0

About one-quarter of clients took no ARVs during pregnancy. The primary reason given for not taking ARV during pregnancy was no antenatal care (19%), but most of these women reported attending a women's consultation or HIV/AIDS center during the pregnancy (Table 37). Fifteen percent said that their HIV status was not known during the pregnancy (16%) (Table 41). In rare cases, reasons included that the doctor did not recommend ARV, the woman did not believe the result of the HIV test, very premature birth, the woman did not believe in ARV effectiveness or did not want to take it, or she hid her HIV-test result. Almost 20% of the women did not give a reason.

Table 41. Percentage of postpartum clients distributed by reasons for not having ARV during pregnancy

	Postpartum clients (n=64)
Did not have antenatal care	18,8
Did not know HIV-status	15,6
Was not advised to take ARV s	3,1
Did not want to take ARVs	4,7
Other	39,1
Difficult to say	10,9
No answer	7,8

We have analyzed data from **the group of the women who did and did not take ARV during pregnancy**. The women who took ARV in pregnancy were educated, had permanent employment, and were married or had a permanent partner more often than those clients who took no ARV during pregnancy (Table 42). There was not a difference in answers of the two groups about ways of getting HIV. Significantly more clients with ARV prophylaxis planned the current pregnancy, but there was no difference among these two groups in using contraception during the last year.

Women who did not take ARVs during pregnancy were almost five times less likely to have attended an HIV/AIDS center than women who took ARVs (20% vs. 95%), and almost three times less likely to have attended a women's consultation center during pregnancy (30% vs. 94%). This presented a missed opportunity to provide effective counseling to a large percent of

PMTCT+FAMILY PLANNING

women to convince them to take ARV during pregnancy (20% in HIV Center and 30% in women consultation).

More women in the group who took ARVs during pregnancy wanted to have another child in the future. A surprising finding is that they more often felt stigmatized during antenatal care in comparison with the women who did not take ARV. An important finding about the group who did not take ARV is that more than 60% of these women had already given birth.

Table 42. Percent of interviewed postpartum clients who did not receive ARV during pregnancy and the whole group of postpartum clients

	Interview	
	Postpartum clients who did not take ARV in pregnancy (n=64)	Postpartum clients who take ARV in pregnancy (n=193)
Mean	23,84	23,73
Infected by injecting drug use (p=0.338)	42,2	29,5
Less than complete secondary education**	25,0	11,9
Permanent employment**	17,2	40,4
Married*	42,2	57,0
Constant partner*	76,6	89,1
Current pregnancy is unplanned**	71,9	47,7
Used any contraception before this pregnancy (p=0.356)	26,6	34,9
Attendance at an HIV/AIDS Center**	20,3	95,3
Attendance at a women's consultation**	32,8	94,3
Stigmatized in Women consultations**	15,6	18,7
Had previous pregnancies (p=0.338)	70,3	63,7
Had previous deliveries**	64,4	35,8
Wanted to have children in the future*	9,4	21,8
Were counseled on PMTCT**	18,8	87,6

Note: In Table 42, significant difference is marked as * : $p \leq 0.05$; **: $p \leq 0.01$.

Care during labor and delivery

Women in the sample were asked whether they were given any **ARV in delivery** (Table 39). Eighty-seven percent of women reported they had ARV in delivery, and 11% reported that they did not receive ARV at this stage. Twenty percent of postpartum clients reported that they delivered before their 38th week of pregnancy, 15% at 38th week, and the remainder at 39 weeks or later (Table 43).

Table 43. Percentage of respondents distributed by week of pregnancy in which they delivered

	Postpartum clients (n=261)
Before 38 weeks	19,9
38 week	15,2
39 and later	64,9

Most women reported that they had vaginal deliveries. The data shown below in Table 44 indicate that the rate of Cesarean section among HIV+ women was about 15%.

Table 44. Percent of women and specific mode of delivery

Delivery mode	Postpartum clients (n=261)
Cesarean section	14,9
Vaginal	84,7
Difficult to say	0,4

We asked women if they had experienced any **uncomfortable medical procedures** during their stay in the maternity. These procedures, which are unnecessary and can be also traumatic for skin or mucous membranes, increase the risk of MTCT. These procedures are advised against, especially for women with HIV⁵ (Table 45). About 35% had urine bladder catheterization, 24% reported shaving of the perineum, 40% reported having an enema, and more than half reported that they had instrumental vaginal examination.

Table 45. Percent of women who underwent uncomfortable procedures at maternity

Procedures	Postpartum clients (n=261)
Instrumental vaginal examination	53,3
Urine bladder catheterization	34,5
Perineum shaving	24,1
Enema	39,8

Newborn care

The last stage of ARV prophylaxis is to give ARV to the neonate. More than 90% of women said their child received ARV after birth, but 7% of the women did not know (Table 38). Compared with other PMTCT methods, this was the one most often provided.

Almost 70% of women reported that they were “rooming in” (their babies stayed with them night and day), 24.5% of children stayed in the newborn department, and 5% stayed in the neonatal intensive care unit (Table 46). Almost all women said their children were fed with formula; only 2 children (0.8%) were breastfed in the maternity.

Table 46. Percent of women reporting specific practices in maternities

	Postpartum clients (n=261)
Child’s location after birth	
Rooming-in	68,6
Child was in newborn department	24,5
Child was in neonatal intensive care unit	4,6
Child feeding practices	
Artificial feeding	96,2
Breastfeeding	0,8
Other	1,9
No answer	0,4

“It was very helpful for me to participate in this study. Due to the interview and following counseling, I have received information extremely needed for me. It was the very first time when I was able to discuss with health workers all my problems in such respectful way.”

Interviewee from Irkutsk according to E.V. Popova,
Regional supervisor

⁵ Enkin, Keirse, Neilson, et al, (2000) *A guide to effective care in pregnancy and childbirth*, Third Edition, Oxford: Oxford University Press.

Key findings

- Most postpartum women with HIV knew the main methods of prevention of MTCT (ARV in pregnancy, delivery and a child after birth, child feeding with formula), but only one-third said that having a Cesarean section is a method of prevention. The main place for providing PMTCT counseling is the HIV/AIDS center (about 90% of total clients). Only one-third of postpartum clients reported receiving counseling on PMTCT in maternities and in women's consultations.
- Despite the high level of attention given to PMTCT in Russia, as now demonstrated in the PMTCT Guidelines, PMTCT Standards, and improving governmental financing of ARV distribution, provision of a complete ARV course is still a serious problem for Russian regions. Only 67% of women and their children received the full ARV course during pregnancy, delivery, and in the neonatal period.
- ARV during pregnancy was provided less often than during delivery and to the neonate. The primary reasons given for not having ARV during pregnancy was no antenatal care (19%), and no HIV-testing during pregnancy (16%).
- The group of women who did not receive ARV during pregnancy had some distinguishing features: they were less educated, more often alone or not married, the pregnancy was unplanned, and not more than a third of those who did not receive ARVs had ever attended an HIV and AIDS center or women's consultation during the pregnancy. Even fewer were counseled on PMTCT. More than half of such women had already had children and almost all of them didn't want to have any more children in the future.
- Caesarean section is not used as a PMTCT method in Russian maternities. Fifteen percent of Caesarean section in women with HIV is the same and sometimes even less than in general population of women given birth. Uncomfortable and unnecessary medical procedures (e.g., urine bladder catheterization, perineum shaving and enema) that can increase HIV transmission are still quite widespread in Russian maternities.
- ARV prophylaxis to women in delivery and to neonates after birth was provided more often than ARV prophylaxis in pregnancy. However, 7% of women did not know if their child had received ARV, despite the fact that the National PMTCT Guidelines require women's written agreement for ARV provision to children.
- More than 30% of children were separated from their mothers after birth, despite only 5% needing intensive care.

Data from Medical Records

Demographic and Social Characteristics of HIV+ Women, HIV and AIDS History, and Concurrent Diseases

Data extracted from the 2,528 patient charts reviewed demonstrate that most of the women who delivered or aborted a pregnancy between January 2002 - October 2005 were permanent residents in the regions of the study. Only six women were from other regions: three abortion clients (1 from Moscow region and 2 from Yakutia Republic) and three postpartum clients (1 - St-Petersburg, 1- Chitinskaya oblast, 1 - Yakutia Republic). One postpartum client was from another country and four postpartum clients were living in prison.

Demographic characteristics presented in Table 47 show that postpartum and abortion clients were about 24 years old on average. About half of both types of clients were between the ages of 21 and 24, and 40% were over age 24. The remainder (about 10%) were younger than 21 years old. There was not a significant difference in age distribution between types of clients.

Table 47. Percent distribution of clients by age (data from charts of 2002-2005)

	Charts	
	Postpartum clients (n=1457)	Abortion clients (n=1071)
<21	12,4	9,5
21-24	47,4	45,9
>24	40,2	44,5
Mean age (years)	24,1	24,7
Youngest (years)	15	15
Oldest (years)	40	42

About half of postpartum clients and about 70% of abortion clients were **identified as HIV+** before the current pregnancy (Table 48). About 40% of postpartum clients, but only 13% of abortion clients, were identified during the current pregnancy. Less than 8% were identified at delivery.

Table 48. Percent distribution of charts by the situation when HIV status was identified (data from charts)

	Charts	
	Postpartum clients (n=1457)	Abortion clients (n=1071)
Before current pregnancy	50,6	69,8
At current pregnancy	37,3 (n=544)	13,1
In delivery current/previous (for abortion clients only previous)	4,4	0,2
After delivery current/previous (for abortion clients only previous)	6,4	0,4
Other	0,3	6,9
Unknown	1,0	9,6

Among clients who learned of their HIV status during the current pregnancy, about 62% of abortion clients were identified as HIV+ at or before the 10th week of pregnancy (Table 49). In contrast, about 80% of postpartum clients had a positive HIV test at the 11th week of pregnancy or later. More than 30% of postpartum clients were identified as HIV+ later than the 28th week of pregnancy.

Table 49. Percent distribution of clients by week of the current pregnancy when HIV status was identified, of those whose HIV status was identified in the current pregnancy (data from charts)

	Charts	
	Postpartum clients (n=530)	Abortion clients (n=112)
Mean week of HIV status recognition	22,4	10,8
10 weeks and earlier	17,2	61,9
11-19 weeks	22,2	26,2
20-28	28,6	10,8
29 weeks and later	32,4	0,7

In just a few cases. **AIDS** was diagnosed by the time of delivery or abortion (Table 50). About 3% of postpartum clients and 0,5% of abortion clients received ARV for treatment purposes.

Table 50. Percent distribution of charts by AIDS and ARV treatment (data from charts)

	Charts	
	Postpartum clients (n=1457)	Abortion clients (n=1071)
AIDS diagnosed	0,3	0,4
No AIDS diagnosed	94,2	85,9
Unknown	5,5	13,7
ARV treatment	3,2	0,6
No ARV treatment	95,3	85,6
Unknown	1,6	13,8

According to the medical records, about half of these HIV+ women had experience using injecting drugs (Table 51).

Table 51. Percent distribution of clients by means of history of IDU (data from charts).

	Charts	
	Postpartum clients (n=1457)	Abortion clients (n=1071)
History of IDU	50,2	48,0
No IDU in history	38,9	33,3
Unknown	10,9	18,7

The records also show that only about 70% of postpartum clients and 80% of abortion clients were tested for sexually-transmitted infections (STIs). More than one-third of postpartum clients and one-fifth of abortion clients who were tested were diagnosed with different STIs (Table 52-53).

Of those diagnosed with STIs, only about 80% of postpartum clients and 70% of abortion clients were treated for the condition.

Table 52. Percent distribution of clients by STI testing, prevalence, and treatment (data from charts)

	Charts	
	Postpartum clients (n=1457)	Abortion clients (n=1071)
STI testing conducted	72,1	85,2
No STI testing	25,9	6,4
Unknown	1,9	8,4
STI prevalence (among those tested)	N=1051	N=911
STI diagnosed	36,9	20,9
No STI diagnosed	62,7	78,1
Unknown	0,4	1,0
STI treatment (among those needing treatment)	N=389	N=191
Treated	77,4	80,7
Not treated	15,5	15,1
Unknown	7,1	4,2

Syphilis was diagnosed in 10.5% of clients who subsequently gave birth, and in 21% of clients who aborted the pregnancy (Table 53). Herpes was diagnosed in a third of postpartum and about 15% of abortion clients. There was also quite a large percent of other sexually acquired infections such as chlamydia and ureaplasma. More than 20% of clients had trichomoniasis, and about 30% of positive diagnoses were of other STIs: bacterial vaginosis, candidiasis, cytomegalovirus infection, mycoplasma, and condiloms. Very few women had honoree.

Table 53. Percent distribution of positive diagnoses by type of STI diagnosed (data from charts)

	Charts	
	Postpartum clients (n=389)	Abortion clients (n=191)
Syphilis	10,5	20,9
Gonorrhea	0,8	1,6
Chlamydia	17,2	17,3
Herpes	34,4	15,7
Ureaplasma	24,1	22,5
Trichomoniasis	23,8	24,1
Other	25,9	36,1

About 80% of clients were tested for hepatitis (Table 54). About half of postpartum and 60% of abortion clients tested were diagnosed with **viral hepatitis**. Most women were infected by hepatitis C virus (more than 80% of the infected), and about 10% had both hepatitis types B and C.

Table 54. Percent distribution of clients by testing on hepatitis and its specific prevalence (data from charts)

	Charts	
	Postpartum clients	Abortion clients
Hepatitis testing	n=1457	n=1071
Hepatitis tested	84,3	80,4
No hepatitis testing	13,1	8,7
Unknown	2,6	10,9
Hepatitis prevalence (among those tested)	n=1228	n=860
Hepatitis diagnosed	56,7	66,7
No hepatitis diagnosed	42,7	32,3
Unknown	0,6	1,0
Specific hepatitis prevalence (among those with positive diagnosis)	n=699	n=574
B	4,9	3,0
C	83,1	83,8
B + C	11,9	10,6
Other	0,1	2,0
Unknown	0	2,4

Key findings

- About half of women with HIV who had delivery or abortion had experience with injecting drug use.
- Women with HIV had a high rate of STIs (37% of postpartum and 21% of abortion clients). However, this is probably an underestimate of STI prevalence, because only 72% of postpartum women and 85% of abortion clients were tested for STIs.
- Thirteen percent of postpartum clients were not tested on other serious infections that can be transmitted to a fetus – hepatitis C. Fifty-seven percent of women who gave birth had viral hepatitis.
- The retrospective part of study demonstrated that more than half of postpartum and abortion clients knew their HIV status before current pregnancy.

Fertility History and Family Planning

We collected from medical histories data on women's pregnancies and pregnancy outcomes – live births, abortions, miscarriages and still births (Table 55-57). Most women had had a **previous pregnancy** (55% of postpartum clients and about 77% of abortion clients). The mean number of previous pregnancies was 2 per woman for abortion clients and 1 per woman for postpartum clients (Table 55).

Table 55. Proportion of women had previous pregnancy (data from charts)

	Postpartum clients (n=1457)	Abortion clients (n=1071)
Had previous pregnancies	55,1	76,5
No previous pregnancies	44,7	21,1
Unknown	0,2	2,4
Mean number of previous pregnancies	1	1,9

PMTCT+FAMILY PLANNING

For the four-year period studied, more abortion clients had **previous deliveries** than did postpartum clients (51% and 25%, respectively) (Table 56). According to the charts, about 10% of postpartum clients and 8% of abortion clients had a previous miscarriage or still birth.

Table 56. Percent of clients distributed by previous deliveries (data from charts)

	Charts	
	Postpartum clients (n=1457)	Abortion clients (n=1071)
Had previous deliveries	24,6	51,4
No previous deliveries	75,2	48,6
Unknown	0,2	0
Previous miscarriage or still birth	9,5	8,3
No previous miscarriage or still birth	90,1	91,2
Unknown	0,4	0,5

Forty percent of postpartum clients and nearly 60% of abortion clients had a **previous abortion** (Table 57). The mean number of abortions was 2 per woman, and 11% of abortion clients previously had 3 or more abortions.

Table 57. Percent of clients distributed by history of previous abortion (data from charts)

	Postpartum clients (n=1457)	Abortion clients (n=1071)
Had previous abortion	37,8	57,0
No previous abortion	62,0	43,0
Mean number of previous abortions	0,62	1,1

About 82% of abortion clients had the current abortion at the 12th week of the pregnancy or before (Table 58), while 3% women had it between the 13th and 19th weeks of pregnancy and 15% at the 20th week or later.

Table 58. Percent distribution of weeks of pregnancy when abortion was performed (data from charts)

	Abortion clients (n=1071)
12 weeks and earlier	81,3
13 -19 weeks	3,4
20 weeks or later	15,3
Mean week of pregnancy	11,4

Table 59 demonstrates that in most cases the abortion was performed as a result of the woman’s personal reasons (69%), 24% of women had medical/health reasons to have the abortion (specific reasons are unknown), and in a few cases (2%), the records state that the woman was having the abortion because of “social reasons⁶.” Few other reasons were mentioned (ectopic pregnancy, intrauterine death of fetus). Three abortions were not performed in a hospital (and are termed “criminal abortions”).

⁶According to the Russia law there is a list of special social reasons to abort pregnancy, one of them is abandonment of a previous child.

Table 59. Percent distribution of type of abortion that was performed (data from charts)

	Abortion clients (n=1071)
Women's personal reasons	68,8
Medical reasons	24,3
Social reasons	2,4
Other	3,1
Unknown	1,5

According to the records, 3,4% of abortion clients (36 women) experienced complications after the current abortion: endometritis (21 women), bleeding (12 women), and perforation of uterus (2 women). Three abortions ended in removal of the uterus.

According to medical charts, 87% of abortion clients (but only about half of postpartum clients) were counseled about contraception (Table 60). Only a few women were provided with a contraceptive method in the maternity or gynecological department after delivery or abortion.

Table 60. Percent distribution of clients who were counseled on family planning in this institution and provided with a contraceptive method (data from charts)

	Postpartum clients (n=1457)	Abortion clients (n=1071)
Counseled on family planning	54,2	86,8
Not counseled on family planning	11,4	9,1
Unknown	34,5	4,1
Provided with method	2,7	2,4
Not provided	85,2	84
Unknown	12,0	13,6

Condoms were the most frequently advised method of contraception after delivery or abortion. The second method most often mentioned in the charts was birth control pills, and about one-third of women were advised to use an intrauterine device (Table 61). In about 2% of postpartum and abortion clients, sterilization was performed. Only 36% of postpartum women and 42% of abortion clients were counseled to use methods for dual protection (prevention of HIV transmission to partner and for pregnancy prevention).

Table 61. Percentage of clients advised to use a contraceptive method in this institution by type of method advised (data from charts)

	Postpartum clients (n=789)	Abortion clients (n=930)
Condoms	82,1	68,7
Hormonal birth control pills	34,3	54,2
Injective contraceptive	5,8	16,6
Intrauterine device	22,1	10,1
Emergency contraception	4,6	1,8
Sterilization	2,0	1,8
Other (barrier)* method	0	2,4*
Traditional methods	0	2,3
Dual protection (condoms and a medical method)	36,0	41,9

Key findings

- Women seeking an abortion were much more likely to report previous pregnancies, deliveries, and abortions in comparison with postpartum clients. It is possible to suggest that previous pregnancy is a risk factor for abortion. That is why it is so important to provide good counseling on family planning at each stage of women's health care.
- Complications resulting from abortion may contribute to serious sequelae for women's health such as infertility. About 3% of women had short-term complications after abortion, including very serious ones such as perforation of the uterus. The risk of complications after abortion increases at the 13th week of pregnancy and later. It was noted that about 20% of abortions were performed after the 13th week.
- According to the medical records, almost all abortion clients (about 90%) were counseled on family planning in gynecological departments and only half of postpartum clients in maternities. In 35% of postpartum client records, information about contraceptive counseling was missing.

PMTCT

Usually there is no data about HIV status of children in the women's medical charts in maternities for reasons of confidentiality. So the data about children previously born by women with HIV were collected from medical records of the HIV/AIDS center. **Postpartum clients** delivered 414 children from previous pregnancies: 320 were HIV-negative at the time of record review, and 5 were HIV+. The HIV status of 89 children of HIV+ postpartum clients is unknown.

Abortion clients previously gave birth to 609 children: 309 were HIV-negative at the time of record review, 11 HIV+, and the sero-status of 229 is unknown from charts.

The absence of information can be at least partly explained by the fact that some of these children were probably younger than 18 months of age, which is when they must be tested for HIV under Russian regulations.

Care during pregnancy

Antenatal care was provided to nearly 80% of HIV+ women who delivered (Table 62), most of whom received antenatal care simultaneously in HIV/AIDS centers and women's consultations (75%). About 20% had antenatal care only in a women's consultation and 6% had antenatal care only in an HIV/AIDS center (Table 63).

Table 62. Percentage of postpartum clients provided antenatal care (data from charts)

	Postpartum clients (n=1457)
Antenatal care provided	76,7
No antenatal care	23,0
Unknown	0,3

Most of the women (86%) started antenatal care before the 29th week of pregnancy (Table 63). This shows that a considerable group of women had a chance to start taking the full ARV course during pregnancy.

Table 63. Percentage of postpartum clients who received antenatal care distributed by specific place for antenatal care and time of beginning antenatal care (data from charts)

	Postpartum clients (n=1117)
HIV/AIDS center only	5,8
Women's consultation only	18,4
HIV/AIDS center and women's consultation	74,8
Other	0,9
Unknown	0,1
Mean week of pregnancy of antenatal care began	17,8
10 weeks of pregnancy and before	26,9
11-19 weeks	31,0
20-28	27,9
29 weeks and later	14,2

Data on preventive care practices was collected from postpartum charts. A complete course of ARV was provided in only 62% of mother-infant pairs (Table 64). This low proportion of complete coverage by PMTCT methods is mainly explained by the low percent of women who received ARV during pregnancy (66%).

Table 64. Coverage by ARV prophylaxis methods of women with HIV and their children

	Postpartum clients (n=1457)
ARV during pregnancy	65,7
No ARV during pregnancy	32,8
Unknown	1,5
ARV in delivery	84,3%
No ARV in delivery	14,5
Unknown	1,2
	Children (n=1452)
ARV to a child	95,0
No ARV to a child	4,6
Unknown	0,4
Complete ARV course to pairs (mother and her child)	62,3%

AZT was the most commonly used ARV prophylaxis. In a few cases, women received other ARV drugs (Table 65).

Table 65. Percentage of postpartum clients distributed by specific ARV at pregnancy (data from charts)

	Postpartum clients (n=957)
AZT	91,4
Nevirapin	3,1
Phosphazid	8,9
Other	3,1
Unknown	0,2

PMTCT+FAMILY PLANNING

During the period of this retrospective study, two different federal PMTCT documents indicated different times to start the antenatal ARV course (14th week of pregnancy in PMTCT Guidelines #606 [2003], and 28th week in the Federal Standard of 2005). Due to this difference, we do not analyze ‘correct start date for treatment’ from these data. However, we do find that ARV prophylaxis at 36th week of pregnancy and later (considered as “late ARV prophylaxis,” which requires a special ARV prescription) occurred in only about 4% of cases.

Side effects of ARV were infrequent, according to the charts (Table 66). In only 7% of cases were such problems as anemia noted in the charts, and more rarely, dyspepsia, rash, hepatic and nephrological problems. ARV regimes were changed in 23% of those cases. The low prevalence of side effects may be explained either by good tolerance of AZT or perhaps by insufficient registration of negative events in the records.

Table 66. Percentage of postpartum clients with side effects on ARV (data from charts)

	Postpartum clients (n=957)
Side effects	7,2
No side effects	84,2
Unknown	8,6

No ARV during pregnancy was recorded in 23% of cases. The main reason recorded was lack of antenatal care during pregnancy (70%). Other reasons such as refusal to take ARV, side effects, and concurrent disorders were quite rare (Table 67).

Table 67. Percentage of clients distributed by specific reasons for absence of ARV therapy during pregnancy (data from charts)

	Postpartum clients (n=500)
Refused to take ARV	7,8
ARV side effects	0,8
No drugs	2,8
Somatic concurrent problems	0,6
Psychiatric disorders	6,4
Unknown	11

We cross-tabulated ARV prophylaxis in antenatal period and experience of IDU. According to the charts, history of IDU was a risk factor to decline ARV prophylaxis in antenatal period: 37% of women with IDU experience had ARV in pregnancy, in contrast with 51% of women with no IDU experience ($p < 0,001$).

Care during delivery

Chart data show that almost 15% of clients did not receive ARV during labor (Table 68). While still a high proportion, this is two times less than the proportion of women who did not take ARV during the antenatal period. ARV during delivery was provided to 84% of women, half of whom received Azidotimedin, and half of whom received Nevirapine.

Table 68. Percentage of clients distributed by ARV in delivery and specific ARV (data from charts)

	Postpartum clients (n=1457)
Given ARV in delivery	84,3
No ARV during delivery	14,5
Unknown	1,2
Of those given ARV in delivery, percent who received:	N=1228
Azidotimedine	58,2
Nevirapin	43,0
Phosphazid	0,8
Other	0,2

The main reason for **absence of ARV prophylaxis in delivery** was diagnosis of HIV after delivery, about 40% (Table 69). There was no information in the charts about why diagnosis of HIV was late in such a high percent of cases. It is possible that this was due to lack of rapid HIV tests in maternities or untrained personnel.

The second most prevalent reason recorded was ‘no time for ARV prophylaxis because delivery had started’ (about 20%). Twenty-two women gave birth at home or in the ambulance (about 9%). Unavailability of ARVs in the maternity was the reason given in about 5% of cases. Two women who had tested negative in antenatal screening were found to be positive after delivery. Eighteen women had hidden their HIV status upon arrival at the maternity. In almost 20% of the charts, no information was recorded on why ARV was not provided during delivery.

Table 69. Percentage of clients distributed by reasons why no ARV during delivery (data from charts)

	Postpartum clients (n=225)
HIV+ status identified after delivery	39,6
Came to maternity in delivery process	20,4
Came to maternity after delivery	9,3
No ARV at maternity	4,9
Refused to take drugs	2,2
Other	4,9
Unknown	18,7

The most common **mode of delivery** for HIV+ women was vaginal (Table 70). Only in 9% of cases was scheduled caesarean section conducted. About 19% of deliveries were recorded as premature (at 37 weeks gestation or less).

Table 70. Percent of clients distributed by specific mode of delivery specific and week of pregnancy in which they delivered (data from charts)

	Postpartum clients (n=1457)
Vaginal delivery	85,5
Schedule caesarean section	9,0
Urgent caesarean section	5,5
37 week and less	18,9
38 week	17,7
39 and later	63,2
Unknown	0,2

PMTCT+FAMILY PLANNING

According to the chart data, about 47% of **vaginal deliveries** had **complications** (Table 71). The most common complications recorded were ruptures of cervix, perineum, or vagina, and premature rupture of membranes (81%). For about one-quarter of women, the complication notes was ‘no progress in labor’ (Table 72). Half of the other complications recorded were problems with the placenta.

About 6% (14 women) had **complications after cesarean section** (Table 71-72). Mostly wound problems and bleeding. No women died in maternities.

Table 71. Percent of clients distributed by complications after specific mode of delivery (data from charts)

	Postpartum clients	
	Vaginal mode of delivery (n=1457)	Cesarean section (n=211)
Complications	46,6	6,2
No complications	53,4	93,8

Table 72. Percent of clients distributed by specific complications after specific mode of delivery (data from charts)

	Postpartum clients	
	Vaginal mode of delivery (n=581)	Cesarean section (n=14)
Ruptures of cervix, perineum or vagina	41,4	-
Premature of rupture of membranes	40,4	-
No progress in labor	22,9	-
Bleeding	6,2	3 women
Endometritis	0,5 (3 women)	2 women
Wound problems	0	5 woman
Other	27,7	2 women

Avoiding invasive procedures during pregnancy and labor that increase the risk of woman’s blood contact with fetus or a child is one of the requirements of PMTCT. Chart data indicate that most women did not experience any **invasive procedures during pregnancy**. In rare cases were amniocentesis (3 women) and cordocentesis (3 women) recorded.

However, more than 80% of women’s charts recorded some **invasive procedures during labor**, most of them relevant to vaginal deliveries (Table 73). About one-quarter of women had artificial rupture of membranes, suturing of the perineum, cervix, or vagina, and in 12,5% of cases, hand examination of the uterus.

Table 73. Percent of clients distributed by specific invasive practices in delivery (data from charts)

	Postpartum charts (n=1457)
Episiotomy	11,8
Artificial rupture of membranes	25,9
Induced labor	11,8
Suturing the perineum, cervix, or vagina	22,4
Application of forceps	0,3
Hand examination of uterus	12,5
Other	18,6

PMTCT+FAMILY PLANNING

There was also quite widespread use of **uncomfortable and unnecessary routine procedures** that can cause bleeding and infections, such as instrumental vaginal examination in delivery, urine bladder catheterization, shaving, and enema (Table 74).

Table 74. Percent of clients distributed by specific uncomfortable routine procedures in delivery (data from charts)

	Postpartum charts (n=1457)
Instrumental vaginal examination	51,2
Urine bladder catheterization	63,4
Shaving	47,8
Enema	49,0

Care of newborn

During the retrospective period, 1,457 women delivered 1,461 children (4 women had twins) 1,452 of them born alive and 9 cases of stillbirths were recorded. ARV prophylaxis to newborns was the highest among other stages of ARV for PMTCT (95%) (Table 75). The most common time to begin ARV prophylaxis to children was in the 8 hours immediately following delivery. No children were given ARV prophylaxis after 72 hours, when ARV is not effective. Most children were given azidotimedin (64%); 36% of children had Nevirapin.

Table 75. Percent of children distributed by taking ARV prophylaxis, time of beginning ARV and specific ARV (data from charts)

	Postpartum charts
ARV to a child	N=1452
Child had ARV	95
No ARV to a child	4,6
Unknown	0,4
Time ARV beginning	N=1380
1-7 hours	22,9
8 hours	60,0
9 – 72 hours	15,6
Specific ARV to a child	N=1380
Azidotimedin	64,0
Nevirapin	36,2
Phosphazid	0

Five percent of children (74 children) received no ARV prophylaxis after birth. The main reason recorded was delayed identification of HIV status of the mother (47%) (Table 76). The second most prevalent reason recorded was no ARV at the maternity (16%). Three children were in severe health condition. One woman refused to give ARV to a child and one woman left the maternity with her child soon after delivery. In 26% of cases, there was not enough information explaining why ARV was not provided to children.

Table 76. Percent of children distributed by specific and reasons of absence of ARV prophylaxis in children (data from charts)

	Postpartum charts (n=74)
Identification of mother's HIV+ status after delivery	47,3
No drugs	16,2
Severe health condition of a child	4,1
Other	6,8
Unknown	25,6

Most infants **were fed with formula** (about 97%) (Table 77). There were few cases of breastfeeding or mixed breast and artificial feeding.

Only about of half of children (57%) stayed together with their mother while in the maternity. About 33% were in newborn department or in isolators.

Table 77. Percent of clients distributed by specific care of children after birth (data from charts)

	Postpartum charts (n=1452)
Child breastfed	1,4
Artificial feeding	96,9
Mixed feeding	0,6
Donated breast milk feeding	0,5
Unknown	0,6
Mother and child were together after birth	56,5
Newborn department	21,2
Children were in isolator	11,5
Emergency department	9,9
Other	0,1
Unknown	0,8

More than 40% of children were diagnosed with health problems (Table 78). Sixty-five percent of children had neurological problems. More than half had low birth weight. Among other problems of children's health included withdrawal syndrome (the mothers of 35 children used drugs during pregnancy), and four children had congenital syphilis.

Although 19% of deliveries were premature according to the international cut-off of 37 weeks, only 26 children were registered as being born prematurely.

Table 78. Percent of children distributed by type of health problem (data from charts)

	Postpartum charts (n=1452)
Children with pathology	43,9
No pathology	55,6
Unknown	0,5
Children with pathology	N=637
Neurological diseases	64,5
Infectious disease	9,4
Low birth weight	52,0
Heart diseases	4,1
Respiratory	10,8
Congenital abnormality	3,6
Other	26,5

PMTCT+FAMILY PLANNING

Only about 72% of children were discharged from the maternity to home. Twenty-two percent of the children were hospitalized in another health institution (Table 79).

Table 79. Percent of children discharged from maternity distributed by specific place (data from charts)

	Postpartum charts (n=1452)
Home	71,6
Other health institution	22,0
Other	5,9
Unknown	0,5

About 8% of children of HIV+ mothers (111 children) were recorded as officially abandoned in maternities (Table 80). The family status of 3% of children (35 children) was unknown by the time of the study and they were at risk of being abandoned.

Table 80. Percent of abandoned children (data from charts)

	Postpartum charts (n=1452)
Not abandoned	89,5
Abandoned	7,6
Unknown	2,4

We had tried to analyze HIV-status of children. Thirteen children of 1452 died before 18 month of age. By the time of the study, 49% of 1439 children born between 2002 and October 2005 were 18 months or older (706 children) (Table 81). HIV status was recorded in about 65% of charts (458 children). HIV status of 248 children (35%) was unknown for regional HIV/AIDS Center! Explanation of absence of information was only in 20% (Table 82). In 16 cases, the family had moved (6%); in 7 cases (3%), the place of living was unknown; in 20 cases (8%), the family refused to have care; and in 6 cases (2%), no testing equipment was available.

Ninety-six percent of the children upper 18 months were HIV-negative, and 4% (18 children) were HIV+ (Table 81).

Among 733 children under 18 months HIV-status was known in 35 cases. Among those 4 children (11%) HIV-positive, HIV-test of 31 children was negative.

Table 81. Percent distribution by age and HIV status (data from charts)

	Postpartum charts (n=1439)
Children 18 months and older	49,1%
Children under 18 months	50,9%
Children 18 months and older	N=706
HIV-status known	64,8
HIV-status unknown	35,1
HIV-status known	N=458
HIV-negative	96,1
HIV+.	3,9

Table 82. Percent distribution of reasons of absence information about HIV status (data from charts)

	Postpartum charts (n=248)
Family moved	6,5
Unknown place of living	2,8
Refused to have care	8
No tests available	2
Reasons unknown	80

Key findings

- PMTCT practices were assessed during antenatal, delivery and postpartum periods. Retrospective chart review confirms an unsatisfactory PMTCT in Russian regions. Only about 62% of clients received a complete ARV course to prevent MTCT, mainly due to the low level of coverage with antenatal ARV prophylaxis (less than two-thirds of HIV+ pregnant women).
- More than 30% of women did not receive ARV in pregnancy. The main reason given for the absence of ARV during pregnancy was lack of antenatal care (23% of postpartum clients). All these clients had a right to free health services (all of them are permanent citizens), so other reasons exist for non-use of antenatal care.
- Identifying HIV in women in maternities is not very often situation. About 11% of postpartum clients were identified as HIV+ during or soon after deliveries.
- More than half of the women knew their HIV+ status before their current pregnancy and about 70% of the remainder were tested at the 28th week of pregnancy or earlier. This timely discovery of HIV during the current pregnancy afforded providers the opportunity to provide a complete PMTCT course to most women with HIV.
- A very disturbing finding is that about 15% of HIV+ women received no ARV during delivery. Identification of HIV after delivery began was the reason in almost half of these cases.
- Late identification of HIV in women also led to absence of ARV for the neonate. Five percent of children did not have PMTCT and were breastfed.
- Quite a large percent of women (about 20%) had a premature birth (before 38th week of pregnancy).
- According to medical charts, the main mode of delivery for HIV+ women is vaginal, accomplished with a high rate of complications and invasive procedures that can increase risk of MTCT.
- Complications after Cesarean section were few, demonstrating that this is a safe method of delivery.
- The study revealed a large proportion of abandoned children born to HIV+ women. Seven percent were abandoned in maternities, and the future of 2,4% of children was unknown. It is possible that the percent of abandoned children will be even higher after some still in pediatric hospitals are discharged (22% of the children were hospitalized in another health institution after the maternity).
- Proportion of HIV-infected children born during the retrospective period is relatively low, but the HIV status of 35 who were over 18 months during this period is unknown. In most cases there was no explanation why HIV/AIDS center don't have information about HIV-status of children.

Conclusions

This study demonstrates that the HIV epidemic in Russia is spreading among women of early reproductive age through both heterosexual contacts and injection drug use. Antenatal screening is the primary means by which women learn of their HIV status, and other opportunities are missed to diagnose HIV before pregnancy and provide comprehensive PMTCT assistance and referral for HIV care. Moreover, there are women who learn of their HIV status during or after delivery, an indication that the system is not working to its fullest capabilities.

Despite requirements detailed in the National PMTCT Guidelines to provide comprehensive counseling, most of the women in this study were not provided pre- and post-test counseling, and a small number of women were not even informed about HIV testing.

The study revealed several conditions or diseases prevalent among women living with HIV: STIs, injection drug use, and viral hepatitis. According to medical record reviews, of those women diagnosed with STIs, only 80% of postpartum clients and 70% of abortion clients, respectively, were treated. This is a significant failure of the medical care system, especially for the more serious STIs, as witnessed by the birth of four children with congenital syphilis.

Among the medical records reviewed, there were very few women who had been diagnosed with AIDS and who were receiving ARVs for their clinical care. It is important to note that this situation is likely to change in the near future as the natural history of HIV has a cumulative effect and women begin to meet the clinical criteria necessary for being prescribed ARVs.

Family planning

Women living with HIV who had already had children were more likely to abort this pregnancy than women with no children. Abortion can deteriorate women's health, especially late-term abortion, which can be a cause of death for the mother. According to data on voluntary risks presented in *Contraceptive Technology*⁷, the risk from terminating pregnancy by legal abortion in the general population are: 1 death per 100,100 abortions performed annually prior to 13 weeks of pregnancy, 1 in 34,400 between 13 and 15 weeks of gestation; and 1 in 10,200 after 15 weeks. In our study, 19% of women aborted pregnancy at 13 week of gestation and later.

Data is not available on increasing risk of abortion-related complications in women living with HIV in comparison with seronegative women. However, the risk in this group might theoretically increase given the potentially compromised nature of their immune systems. Moreover, experts of WHO concluded in *Medical Eligibility Criteria for Contraceptive Use*⁸ that HIV and AIDS are "conditions that expose a woman to increased risk as a result of unintended pregnancy." Providers need to be trained regarding the special needs of HIV-infected women/couples, as well as the updated WHO *Medical Eligibility Criteria for Contraceptive Use* so that medical barriers are not imposed.

Among the women we surveyed, a large proportion reported previous abortions, and a significant proportion did not plan this pregnancy. Both of these situations argue for the need to rapidly expand counseling and access to family planning services for women living with HIV to decrease the reliance upon abortions and reduce the number of unintended pregnancies.

The fact that many HIV+ women didn't intend to get pregnant but didn't use contraception may be explained by negative attitudes toward contraceptive methods (attitudes that are quite widespread among the entire population), as well as by a general deficiency of information about family planning methods for women^{9,10}.

⁷R.A. Hatcher et al. *Contraceptive Technology*. 18th Revised edition. Ardent Media, Inc, NY, 2004

⁸ *Medical Eligibility Criteria for Contraceptive Use*. 3rd ed., WHO, 2004

⁹ Women and Infant Health Project. Household Survey. Report of Main Findings. by P.H.David et al. JSI. 2002

¹⁰ Women and Infant Health Project. Facility Survey. Report of Main Findings. by P.H.David, JSI, 2001

PMTCT+FAMILY PLANNING

There is also a lack of awareness among health providers of the importance of family planning. The information related to family planning practices is often missed in medical documentations of women with HIV.

When we had started analyzing the charts of postpartum and abortion clients, we recognized the absence of any information related to counseling on family planning happening very often. Due to the study, we initiated new rules of filing in medical records in maternities and gynecological units to collect information about advised contraception.

N.A.Khomenko, research team member from Krasnoyarsk

Currently contraceptive counseling for HIV+ in all types of women's health services is inadequate. The large proportion of clients that got pregnant while using contraception suggests that these women do not know how to use contraceptive methods effectively.

According to above-mentioned Contraceptive Technology risk of death from legal abortion or continuing pregnancy beyond 20 weeks in the general population is higher than the risk of death from using medical contraception. For example, the chance of death in a year for a nonsmoker who is 35 years old or younger and who uses oral contraceptives is 1 in 200,000, who uses an IUD is 1 in 10,000,000, and zero for those women using condoms.

Fertility awareness-based and withdrawal methods are comparatively less effective methods of contraception, and HIV+ clients should be informed of this by providers. On the contrary, condoms can be very effective methods of prevention of both pregnancy and HIV, although their effectiveness is highly dependent on correct and constant use. Most women were not informed by health workers about all effective contraceptive methods, as well as dual protection.

Despite the fact that many women failed to use their preferred family planning method, very few women reported that they were counseled to use emergency contraception.

Health providers in maternities and gynecological units missed the opportunity to counsel women about the benefits of family planning and about effective family planning methods and options, and when counseling was provided, it was apparently not effective. The large proportion of women did not know when fertility returns.

The study showed that 70% of women intended to use condoms and 61% to use pills. Long-term methods were significantly less frequently mentioned, such as IUD (39%), injectable contraceptives (16%), and sterilization (6%). However, most of the women were not planning to have any children in the future.

Supportive activities to develop adherence to family planning practices, such as women's partners' involvement in counseling and free provision of contraceptives, were not used in maternities.

PMTCT

Our study shows that access to and utilization of PMTCT services by women with HIV, as well as appropriate postnatal care for infants, is low. The most alarming finding is the relatively limited number of women in our study who were provided ARV prophylaxis in pregnancy. These women typically had less than a secondary education, no permanent job, no regular partner, no health care, no counseling, had children from previous pregnancies, did not plan the current pregnancy, and wanted no future pregnancies. Women in the medical record review group also indicate high rates of IDU.

The primary reasons identified for not receiving ARVs during delivery and not providing ARVs to the infant reflect the fact that some women did not receive prenatal care or presented late in the delivery process. Also, there is a high rate of premature births, which may mean that women did not have an opportunity to access prenatal care prior to delivery.

PMTCT+FAMILY PLANNING

In contrast with antenatal care, there is high rate of invasive delivery-related procedures that occur in maternities and that may increase risk of MTCT, such as artificial rupture of membranes and episiotomy. These procedures were associated with vaginal deliveries. Artificial rupture of membrane was performed in 25% of cases. The utilization of this procedure requires further study in light of recent research that indicates that it may increase health risks to the newborn. According to some studies^{11,12}, the risk of vertical HIV transmission increased approximately 2% with an increase of 1 hour in the duration of ruptured membranes.

Health workers also routinely used some “hygienic” procedures that can be traumatic for skin and mucous membrane.

Counseling on ARV prophylaxis was relatively high, however. Ten percent of women did not receive post-delivery counseling regarding the importance of infant dosing, and 60% didn't know that Caesarean section is part of a comprehensive package of PMTCT services. A scheduled cesarean section is one of the methods to prevent MTCT; however, in 2005, scheduled Caesarean section was still was not a recognized and frequently practiced method of PMTCT among health providers, its rate being the same as in the whole population. The relatively low rate of Caesarean section is probably due to insufficient knowledge that it is part of a comprehensive set of interventions for PMTCT, as well as health care provider concerns about occupational exposure.

Being born of HIV+ women is a risk factor to be abandoned¹³. An already high proportion of abandoned children might increase by the time of discharge from pediatric clinic.

Until now, separation of children from their mothers is a widespread practice in Russian maternities. Being together with a child in the maternity is very important for a woman to develop skills to care for her child properly.

There are no real statistics on HIV transmission from mother to child because of the absence of information about HIV status for a high percent of children.

Discussion and Recommendations

The data of the study have supported development of recommendations to decrease the number of unwanted pregnancies in HIV+ women and reduce the risk MTCT.

First, it is critical to identify women living with HIV in order to provide comprehensive health care, including PMTCT and family planning interventions. To achieve high rates of HIV testing coverage, it is essential to promote and improve access to voluntary counseling and testing for all women and men of reproductive age in polyclinics and other health facilities. Health care providers across multiple clinical specialties need to be trained to provide HIV counseling and health administrators need to be trained in how to evaluate the quality of the counseling provided.

The ability to offer HIV testing during pregnancy needs to be improved. Providing a constant supply of rapid tests kits can help ensure that all pregnant women who come in contact with the medical system are offered and accept testing. Some countries have begun community-based rapid HIV antibody testing services that could be replicated in Russia. In addition, outreach efforts should be made to HIV+ women, perhaps by the staff of the HIV/AIDS centers, in order to offer antenatal care in a safe and supportive environment.

¹¹ Gaillard P; Mwanyumba F; Verhofstede C et al Vaginal lavage with chlorhexidine during labour to reduce mother-to-child HIV transmission: clinical trial in Mombasa, Kenya. *AIDS*. 15(3):389-396, 2001.

¹² The International Perinatal HIV Group. Duration of ruptured membranes and vertical transmission of HIV-1: a meta-analysis from 15 prospective cohort studies. *AIDS*. 15(3):357-368, 2001.

¹³ Positively Abandoned Stigma and Discrimination against HIV-Positive Mothers and their Children in Russia. Human Rights Watch June 2005 Vol. 17 No. 4(D)

There is a need to better inform health care workers about widespread current diseases in women with HIV, such as drug addiction, viral hepatitis, and STIs, that should be routinely addressed during health care visits. The high prevalence of STIs may be due in part to a variety of issues, including incorrect or lack of condom use, multiple partners, and compromised immune systems. The presence of STIs has been shown to increase both the levels of HIV virus in people living with HIV, as well as increased transmissibility¹⁴. Treating STIs in women living with HIV is no different from treating HIV-negative women, except in cases in which a woman is on ARVs and there may be contraindications for some drugs. The guidelines recently published by the British Association for Sexually Health and HIV regarding the management of STIs in HIV+ individuals could be translated into Russian and widely disseminated among Russian health providers to improve their knowledge and skills in STI detection and treatment.

Studies of HIV and hepatitis C co-infection show that IUD-users are more likely than other HIV+ patient groups to be co-infected¹⁵. Co-infected individuals may, however, be more likely “to transmit hepatitis C through sex, perhaps because they have higher levels of the virus in their genital fluids than HIV-negative people... It is currently estimated that 10% of children born to hepatitis C-infected mothers will contract the virus^{13,14}.” The prognosis of people co-infected with HIV and hepatitis C is unclear. Recent studies suggest that “HIV may hasten liver damage in co-infected people, and that co-infected people may have a faster progression to AIDS^{16,17}.” Health providers must have clear recommendations on how to treat patients with hepatitis C, how to prevent HCV transmission from a mother to her child, and about the limited effectiveness of some prescription drugs, including oral contraceptives.

Methods of IDU identification, peculiarities of contraception and care in women with HIV and HCV are presented in the MCHI Guidelines on Reproductive Health of HIV-Positive Women¹⁸.

Family planning

All HIV+ women have the same rights as HIV-negative women to freely choose any method-of-contraception. There are not strict contradictions of family planning method use by HIV+ women except nonoxynol-9-based spermicides for women practicing very frequent sex (e.g. sex workers). However, according to Medical Eligibility Criteria for Contraceptive Use, women with conditions for which unplanned pregnancy is an unacceptable health risk should be advised that, because of their relatively higher typical-use failure rates, sole use of barrier methods for contraception and behavior-based methods of contraception may not be the most appropriate choice for them.

Dual protection (condoms and any other effective method) is the most effective way to protect women from unintended pregnancy, STI, and HIV-resistant types of viruses. However, the international research data demonstrate that not more than 50% of HIV+ women constantly use **condoms** for extended periods of time^{19,20}.

¹⁴ Mwapasa V; Rogerson S; Kwiek J et al. Maternal syphilis infection is associated with increased risk of mother-to-child transmission of HIV in Malawi. *AIDS*. 20(14):1869-1877, 2006.

¹⁵ Hagana H, Thiedeb H and Des Jarlais D C., HIV/hepatitis C virus co-infection in drug users: risk behavior and prevention *AIDS* 2005, 19 (suppl 3):S199–S207

¹⁶ <http://www.aidsmap.com>

¹⁷ Swaminathan S et al. Impaired CD4 response despite effective HAART in patients with Human Immunodeficiency Virus (HIV) coinfecting with hepatitis C (HCV). 44th Annual Meeting of the Infectious Diseases Society of America, Toronto, abstract 58, 2006.

¹⁸ Guidelines on Reproductive health of HIV-positive women. MCHI, Moscow 2006. www.jsi.ru

¹⁹ Wilson T, Massad LS, Riester KA, et al. Sexual, contraceptive, and drug use behaviors of women with HIV and those at high risk for infection: results from the Women’s Interagency HIV Study. *AIDS* 1999;13:591–8

Forsyth BC., Davis J.A., Freudigman K. et al. Pregnancy and birth rates among HIV-infected women in the United States: the confounding effects of illicit drug use. 2002. *AIDS*. 16(3):471-479

Hormonal methods are very effective family planning methods, but do not provide protection from STIs and HIV and are highly dependent on adherence. Other possible problems related to this method for women living with HIV include interactions with ARV (some ARV alter estrogen levels in the blood)^{21,22,23}.

IUDs are highly effective, long-term, and cost-effective methods of contraception. According to the WHO medical eligibility criteria for women with HIV and AIDS, this is a grade 3 criterion, as "theoretical or proved risks generally outweigh the advantages." There are a number of concerns about IUD use by women living with HIV related to contraceptive efficacy, risks of sexual transmission, and acute pelvic inflammatory disease especially with STI²⁴. On the contrary, two studies concluded that the insertion of an IUD "did not significantly alter the prevalence of cervical shedding of HIV-1-infected cells." In other words, IUDs did not increase HIV transmission and "IUD may be a safe contraceptive method for appropriately selected HIV-1-infected women with continuing access to medical services and support continued IUD use in areas with high prevalence of HIV-1²⁵." However, as more HIV-1-infected women become severely immuno-compromised, IUD-associated complications may increase.

There is not any contradiction to **sterilization** for women with HIV according to WHO medical eligibility criteria. In Russia, strict organizational restrictions to the method exist. The Russian Legislation states "sterilization might be done for women older than 35 and having 2 children" after her written informed consent, and in other cases, only if other medical reasons exist (HIV and AIDS is not the reason).

Clients should be informed about available contraceptive methods and their long-term effectiveness, benefits and possible side-effects as well as how to use their chosen method correctly. MCHI have developed booklets for women about different family planning methods. Informed choice of appropriate methods and their use is critical.

The most accessible and appropriate place to provide information on family planning to women with HIV is counseling by health workers in HIV/AIDS centers. Because half of the women interviewed report that they discuss family planning with friends and half know other HIV+ women, correct and effective counseling to HIV+ women can help disseminate information about family planning methods among other women with HIV. Another supportive way is involving the woman's partner in family planning counseling.

In our study, very few women were provided with family planning methods in maternities. There are contradictory opinions on the cost-effectiveness of free provision of contraception. Perhaps distribution of free contraception in maternities and gynecological units is more effective for women with poor adherence to health care and for women who make an informed choice about contraception during antenatal care.

²⁰ Kanouse DE, Collins RL, Miu A, Berry SH. Contraceptive use by couples when one partner is infected with HIV. [Microbicides 2000: March 13-16, Hilton Alexandria Mark Center; Washington, DC: Conference Proceedings: Track C: Microbicides and Other Prevention Modalities: Wednesday, March 15, 2000

²¹ Kathleen E. S. Update on the Management of HIV-Infected Women. HIV/AIDS Annual Update 2005

²² Cohn SE, Watts D, Lertora J, Park JG, Yu S. An open-label, non-randomized study of the effect of depomedroxyprogesterone acetate on the pharmacokinetics of selected protease inhibitors and non-nucleoside reverse transcriptase inhibitor therapies among HIV-infected women. Program and abstracts of the 12th Conference on Retroviruses and Opportunistic Infections; February 22-25, 2005; Boston, Massachusetts. Abstract 82.

²³ Clark R.A. Theall K., Population-based study evaluating association between selected antiretroviral therapies and potential oral contraceptive failure. *J. Acquir Immune Defic Syndrome*. 2004; 37: 1219-1220

²⁴ Carlin EM, Boag FC. Women, contraception and STDs including HIV. *Int J STD AIDS* 1995;6:373-86

²⁵ Richardson B. A., Morrison C. S., Sekadde-Kigonde C.; Sinei S K, et al. Effect of intrauterine device use on cervical shedding of HIV-1 DNA. *AIDS*. 1999. 13(15):2091-2097

Sinei S K, Morrison CS, Sekadde-Kigonde C, Allen M. and Kokonya D. Complications of use of intrauterine devices among HIV-1-infected women *The Lancet* 1998; 351:1238-1241

PMTCT+FAMILY PLANNING

According to our study findings, there is a significant unmet demand family planning services among HIV+ women in Russia. Family planning services should be improved to meet the needs of this population. MCHI is has developed the Guidelines on Reproductive Health of HIV-Positive Women, which will be used to train health workers to provide this service and help health providers to be informed of the advantages and disadvantages of all contraceptive methods in women with HIV.

PMTCT

It is very important to educate health providers to counsel women of reproductive age not only to be tested for HIV prior to pregnancy, but also to begin antenatal care as soon as the pregnancy is recognized. Women should be counseled to attend a health facility regularly and come to the maternity on time in order to get all necessary medical assistance.

Special attention needs to be paid to ensure that counseling is offered to women who are not cared for regularly at an HIV/AIDS center or a women's consultation, and involvement of all relevant specialists must be a standard practice. Some women come to health facilities only for delivery and abortion, and these may be the only chances to counsel them on PMTCT and family planning. Women who refuse to have health care should be visited at home.

To avoid missing opportunities to provide ARVs during labor and delivery in all maternities, rapid tests must be available and providers must be trained in counseling and administration of the test. Health providers must also be informed on the possible identification of HIV in women with previous negative tests in antenatal care when they arrive at maternities. Attentive counseling and examination of women must be conducted, and in some cases, women should be offered drug testing. Women with high-risk behavior should have voluntary rapid testing conducted in the maternity, even if HIV-negative results were obtained in antenatal period.

It is very important that women can participate in selection of the delivery mode, with the health provider fully informing her about the positives and negatives of each mode for her health and the health of her child. Universal precautions must be taken by all health providers during delivery to ensure that HIV transmission to health workers is minimized.

It is also very important to educate health providers to avoid unnecessary invasive procedures during delivery so as not to increase MTCT risk. All procedures that are used in maternities must be evidence-based.

There is evidence that maternal-infant bonding is facilitated by the practice of early and frequent mother-infant contact after birth²⁶. Because of the risk of abandonment of these infants, it is important to practice rooming-in and other practices that increase mother-infant contact whenever possible for HIV+ women and their newborns.

Stigmatization is likely to be one reason some HIV+ pregnant women avoid health care. In order to address this, it is essential that health providers' attitudes toward HIV+ women are changed. This will require ongoing education on HIV, the rights of patients, and how to minimize the likelihood of occupational exposure to HIV, as well as routine collection of feedback from women on their experience in clinics to measure the impact of stigma reduction efforts. It is also very important to create client-friendly health services with in HIV/AIDS centers, women consultations, and polyclinics. Ideally, this would be conducted in conjunction with the active consultation and participation of PLWHA organizations.

Quality improvement efforts to routinely examine data must focus on two critical areas: (1) offering HIV testing; (2) for those who test positive, conducting an in-depth review of those cases for which there is no documented prophylaxis for mother and/or her infant. Each case of MTCT must be investigated by specialists of HIV/AIDS Center and MCH Department, with

²⁶ Enkin, et al (2000), op cit.

PMTCT+FAMILY PLANNING

examination of relevant documentations (antenatal, delivery and children charts) and women's interviews. All problems and mistakes must be identified and discussed with the medical community. The same must be done in each case of absence of information about a child.

At the national level, the first step that must be taken is the complete dissemination of the government's strategy and policies related to comprehensive PMTCT programs. At the regional level, additional support needs to be provided to develop a multidisciplinary public- and NGO-sector coordination mechanism in regions responsible for PMTCT efforts that would include: (1) Developing and implement a comprehensive strategy to provide complete pre- and post-natal health services for women living with HIV; (2) Full integration of family planning services for women living with HIV; (3) Particular focus on addressing abortion rates among women living with HIV; (4) Implementing efforts to drastically reduce the practice of abandonment of children born to HIV+ women; and (5) Further assessing HIV+ women's risk factors that lead to delayed prenatal care-seeking behaviour.

HIV/AIDS centers have a leading role in coordinating work to improve the health care of women with HIV and need to involve all health facilities in the process. Increased attention needs to be paid to integrating PMTCT into maternity services. MCHI trains health professionals in antenatal clinics and maternity hospitals. A training curriculum is now available that includes essential PMTCT information and practical sessions on skills in antenatal, obstetric, and neonatal care²⁷. To improve professional knowledge in 2005, the National Operational PMTCT Guidelines²⁸ were also developed. These Guidelines should be disseminated widely.

²⁷ Prevention of mother-to-child HIV transmission (in Russian). MCHI 2004. www.jsi.ru.

²⁸ Operational Guidelines on Prevention of Mother-to-Child HIV Transmission (in English and in Russian). MCHI 2005. www.jsi.ru.

Annex One

Informed Consent on Inviting an Interviewer Studying Maternity and Family Planning Practices

Hello,

In our healthcare institution, the Maternal and Child Health Initiative is carrying out a study – survey of hospitalized women regarding practices of healthcare delivery.

The goal of the Maternal and Child Health Initiative is to improve healthcare provided to women and children under 14 in the regions of Russia. Outcomes of this study will be used in the programs for refining maternal and child’s care, including the quality of care provided to women with HIV infection.

Let us invite the interviewer who will, without knowing your name, ask you in a confidential setting some questions concerning your health, pregnancy, means of contraception, and care provided to you in medical establishments. Several questions will be devoted to healthcare services rendered for HIV-infection.

In the questionnaire, your personal data will be indicated. This questionnaire comprisesquestions. Survey will take aboutminutes.

Interviewer is not an employee of this healthcare institution. This is.....

At any time during the interview, you may refuse to answer questions.

You will be able to ask the interviewer any questions related to the study and subjects suggested for discussion, as well as receive counseling on the issues touched upon during the interview.

This form indicates the contact information of the person responsible for conducting the study and from whom you may receive all necessary information at any time at your convenience.

We would deeply appreciate if you could participate in the interview. Of judgments of different people, public opinion of many women from the regions is made, in which Maternal and Child Health Initiative is active.

All participants (representatives of health care) of the study are responsible for confidentiality of the survey. The information from the questionnaires will be used in generalized form and for scientific-practical purposes only.

Neither your consent, unwillingness to participate in the study, nor your answers will make any impact on healthcare delivered to you.

Please, write whether you agree that the interviewer is invited?.....

Please, put your signature.....

What day and what time would be the most convenient for you for meeting the interviewer?
.....

What name to be called by the interviewer would you be comfortable with?
.....

Responsible person in the healthcare institution

Healthcare institution.....

Contact information

Annex Two

Informed Consent on Carrying out the Interview Studying Maternity and Family Planning Practices

Hello,.....

I am going to conduct the interview, my name is, I work.....

In this healthcare institution, Maternal and Child Health Initiative is carrying out the study – survey of hospitalized women regarding practices of healthcare delivery.

The goal of Maternal and Child health Initiative is to improve healthcare provided to women and children under 14 in the regions of Russia. Outcomes of this study will be used in the programs for refining maternal and child’s care including the quality of care provided to women with HIV infection.

During the interview, I will be asking you some questions concerning your health, pregnancy, means of contraception, and care provided to you in medical establishments. Several questions will be devoted to healthcare services rendered for HIV-infection.

In the questionnaire, your personal data will be indicated. This questionnaire comprisesquestions. Survey will take aboutminutes.

At any time during the interview, you may refuse to answer questions.

You will be able to ask me any questions related to the study and subjects suggested for discussion, as well as receive counseling on the issues touched upon during the interview.

This form indicates the contact information of the person responsible for conducting the study and from whom you may receive all necessary information at any time at your convenience.

We would deeply appreciate if you could participate in the interview.

All participants (representatives of health care) of the study are responsible for confidentiality of the survey. The information from the questionnaires will be used in generalized form and for scientific-practical purposes only.

Neither your consent, unwillingness to participate in the study, nor your answers will make any impact on healthcare delivered to you.

Do you agree to be interviewed?.....

Signature of the interviewed person

Interviewer

Responsible person in the healthcare institution.....

Healthcare institution.....

Contact information