Reducing HIV Infection and Abandonment of Babies

Injecting drug users often seek medical help late in pregnancy and then relinquish their babies to the state. Surprisingly, their drug use is not the major factor

ST. PETERSBURG, RUSSIA—In the late 1980s, when Russia had detected only a smattering of HIV cases, 270 children became infected in several hospitals through the reuse of contaminated needles. “The country was in shock,” says Evgeny Voronin, who then ran an infectious-disease hospital in Ust-Izhora, on the outskirts of St. Petersburg. The Ministry of Health asked for his help, and he opened a pediatric AIDS center to care for the children. “It was very difficult for us,” Voronin says. “The mothers called us murderers. It didn’t matter that the children were infected very far from us. They thought all people in white coats were responsible for what had happened.”

That early effort evolved into the Centre for Prevention and Treatment of HIV Infection in Pregnant Women and Children, which Voronin still runs. Now, rather than caring for accidentally infected children and their grieving mothers, the center focuses on helping infected mothers prevent transmission to their babies and raising HIV-infected children who have been orphaned or abandoned.

In March, the center’s orphanage had only 33 HIV-infected children. “It’s not the biggest group we help, but it’s the most vulnerable,” says Voronin. His work with HIV-infected children has made him something of a celebrity—visitors have included former U.S. first lady Laura Bush and Western movie stars—and also drawn attention to prevention of mother-to-child transmission (PMTCT) efforts and the country’s staggeringly high prevalence of orphaned and abandoned children. In 2002, the Russian government put the number of such children at 700,000. More than 50,000 children have been born to HIV-infected women in Russia (half during the past 3 years). Although women increasingly are becoming infected through sex, many are injecting drug users (IDUs), and several studies have attempted to untangle how drug use influences both abandonment and the limited success of PMTCT.

Susan Hillis, a reproductive health specialist at the U.S. Centers for Disease Control and Prevention—who incidentally has adopted eight Russian children—collaborated with Voronin and other Russian colleagues in analyzing the factors that lead HIV-infected mothers in St. Petersburg to abandon their babies. The study followed 43 HIV-infected women, two-thirds IDUs, who learned their status during labor and delivery. Half of them abandoned their babies, a process that involves relinquishing the child to the state.

Helping hand. Evgeny Voronin’s work with HIV-infected children and pregnant women has drawn international attention.

“Everyone, including all of our Russian colleagues—people we respect and trust—really believed abandonment to be related to injecting drugs,” says Hillis.

But the data said otherwise: The only significant risk factor was an unintended pregnancy. (Women typically abandon babies before they know the baby’s HIV status, so that’s not a factor.) “Women who aren’t motivated to take care of babies and themselves before delivery are less likely to take care of them afterward,” she says. Hillis, who published these results in the February 2007 International Journal of STD & AIDS, is now working with ob-gyn Anna Samarina at Botkin Hospital here to advocate that more of these women have easy access to contraceptives.

Hillis and co-workers next examined PMTCT in 1500 HIV-infected mothers in St. Petersburg who gave birth between 2004 and 2007. More than half had a history of injecting drugs—with one-third using while they were pregnant. (Only 11.4% abandoned their babies, which Hillis believes reflects the situation today better than the earlier study did.) They all received anti-HIV treatment to prevent transmission, but many began late in pregnancy, when it is less effective, or used substandard regimes. The study, published online on 3 February in the Journal of Acquired Immune Deficiency Syndromes, found that 6.3% of mothers passed HIV to their babies—about three times the rate seen in Western Europe. Women who injected drugs during pregnancy started treatment later, on average. But factors such as access to prenatal care, rather than drug use per se, were more critical in determining the risk of transmitting the virus. “The most important thing is not whether you’re using drugs,” says Hillis. “If we could figure out a way to get them early and give them proper prophylaxis, we could do a tremendous amount to reduce transmission.”

These efforts with orphans and PMTCT have come full circle for Voronin: Twelve of the girls he cared for when they were infected by hospital procedures came to his center when they were pregnant. None infected their babies. “People ask me why do you do so much for orphans?” he says. “We took in these girls with AIDS, but they’re healthy now after 20 years, they have normal lives, and they have their own families.”

—JON COHEN
Editor's Summary

This copy is for your personal, non-commercial use only.

**Article Tools**  Visit the online version of this article to access the personalization and article tools:
[http://science.sciencemag.org/content/329/5988/172](http://science.sciencemag.org/content/329/5988/172)

**Permissions**  Obtain information about reproducing this article:
[http://www.sciencemag.org/about/permissions.dtl](http://www.sciencemag.org/about/permissions.dtl)