MEASURE Communication

REPRODUCTIVE HEALTH TRENDS IN EASTERN EUROPE AND EURASIA

In the past decade, countries in Eastern Europe and Eurasia have undergone economic and social transformations that have affected virtually every aspect of life, including health. By some measures, women's reproductive health has improved, as women in the region today are more likely to use modern contraception and less likely to have an abortion to prevent an unplanned birth. But rates of maternal and infant death are still unacceptably high, the use of preventive health services is low, and there is little awareness about other issues, such as how to prevent HIV/AIDS.

This brief provides highlights of surveys taken in 11 countries since 1996, covering a wide range of women's health topics and providing in-depth information on attitudes and behaviors related to reproductive health. The brief is based on a longer report that analyzes and compares survey results across countries (see page 8). The survey results give program officials, researchers, and policymakers an opportunity to learn about the characteristics of women who have the greatest health needs and the factors that lead to increased contraceptive use, reduced reliance on abortion, and other changes in women's reproductive health behavior.

Purpose of the Surveys

Two U.S.-based agencies, the Centers for Disease Control and Prevention (CDC) and ORC Macro, helped national institutions conduct surveys in Eastern Europe and Eurasia from 1993 to 2001. The two types of surveys, Reproductive Health Surveys (RHS) and Demographic and Health Surveys (DHS), interviewed women from a representative sample of households in each country to gather extensive information on fertility, family planning, maternal and infant health, and other reproductive health topics. Major support came from the U.S. Agency for International Development, with funding in some countries from the United Nations Population Fund and UNICEF.

This brief highlights survey results in 11 countries: four in Eastern Europe (Moldova, Romania, Russia, and Ukraine), three in the Caucasus (Armenia, Azerbaijan, and Georgia), and four in Central Asia (Kazakhstan, the Kyrgyz Republic, Turkmenistan, and Uzbekistan).[1] In Russia, the surveys were conducted in three urban areas only and do not reflect trends in the entire country.

These data provide a first look at women's reproductive health knowledge, attitudes, and behaviors in the wake of the dramatic changes that took place in the region in the early 1990s. Recent family planning programs in the region have tried to increase the availability and use of modern contraceptives and reduce women's reliance on abortion as a means of preventing unintended births. The RHS and DHS therefore looked at levels and trends in contraceptive use, how effectively contraception is being used, and women's knowledge and attitudes about contraception and abortion. The surveys also provide up-to-date, nationally representative information on a range of reproductive and child health issues that can be addressed through new or improved programs.

The Context for Reproductive Health

The countries profiled here share a common history, having either been part of the former Soviet Union or within its sphere of influence. These countries had modeled their health care after Russia's centralized, government-supported system, which provided universal health care to all citizens. The system promoted hospital-based care, creating a surplus of hospitals and specialists and a shortage of primary health care services.

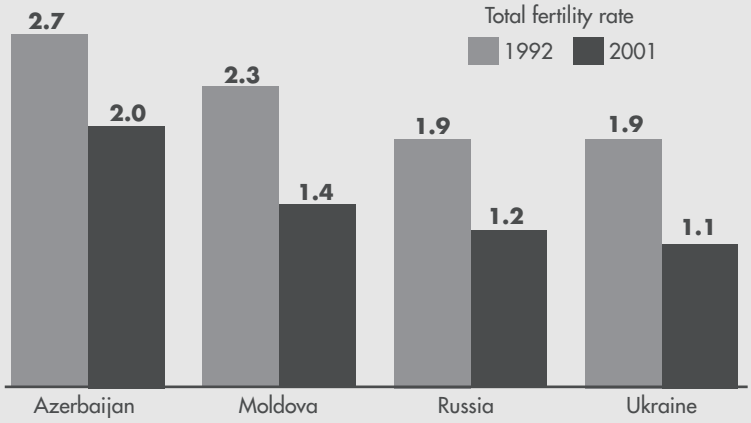
Prior to and during the transition from centrally controlled to market-based economies, the

hospital-based system became too costly for governments to maintain; consequently, most hospitals lack modern equipment, drugs, and supplies. Health care systems deteriorated rapidly in the 1990s, contributing to lower use of preventive health services, including reproductive health care. A combination of unhealthy behaviors (poor diets, smoking, and alcoholism) and low per capita spending on health contributes to the considerably lower life expectancy in the region compared with that of Western Europe.

Governments in all 11 countries are struggling with limited resources and emerging health problems. All of the governments continue to support health care, but many are turning parts of the system over to national insurance agencies or the private sector and may be leaving some population subgroups either uninsured or with minimum benefits.

Figure 1

Fertility Decline in Selected Countries of the Former Soviet Union



NOTE: The total fertility rate is the average number of children a woman would have in her lifetime given prevailing age-specific birth rates.
SOURCE: C. Haub and D. Cornelius, *World Population Data Sheet* (1992 and 2001).

Childbearing Trends

During the 1990s, countries in the region experienced dramatic declines in fertility—the average number of births per woman (see Figure 1). By 2000, fertility rates in most countries were below replacement level, or 2.1 children per woman on average, the number needed to replace parents. If fertility remains below this level, a country's popu-

Table 1

Selected Demographic and Social Indicators

	Population Mid-2002 (millions)	Rate of Natural Increase[a] (%)	Projected Pop. Change 2002-2050[b] (%)	Total Fertility Rate[c] 1998-99	Life Expectancy in Years		Per Capita Income, (GNI PPP)[d] 2000	Health Expenditures per Capita[e] 1990-98	Percent of Women Enrolled in Secondary School[f] 1993/97
					Male	Female			
Eastern Europe									
Moldova	4.3	-0.1	0	1.4	64	71	$2,230	$ 30	82
Romania	22.4	-0.2	-24	1.3	67	74	6,360	65	78
Russia	143.5	-0.7	-29	1.3	59	72	8,010	130	91
Ukraine	48.2	-0.8	-20	1.2	62	74	3,700	54	94
Caucasus									
Armenia	3.8	0.2	-17	1.7	70	74	2,580	27	79
Azerbaijan	8.2	0.8	59	2.0	69	75	2,740	36	81
Georgia	4.4	0.0	-44	1.7	69	77	2,680	46	76
Central Asian Republics									
Kazakhstan	14.8	0.5	-5	1.8	60	71	5,490	68	91
Kyrgyz Republic	5.0	1.3	51	2.7	65	72	2,540	11	83
Turkmenistan	5.6	1.3	42	2.9	63	70	3,800	—	—
Uzbekistan	25.4	1.7	52	2.8	68	73	2,360	—	88
Western Europe									
Austria	8.1	0.0	1	1.3	75	81	24,600	2,108	102
France	59.5	0.4	9	1.9	76	83	23,020	2,287	111

[a] Rate of natural increase is the birth rate minus the death rate, implying the annual rate of population growth without regard to migration.
[b] Projected population growth (or decline) is based on current assumptions about the likely path of fertility.
[c] The average number of children that a woman would have during her reproductive lifetime, given present age-specific fertility rates. Fertility rates reflect the governments' estimates for 1998-99, with the exception of Armenia and Georgia. These have been revised upward based on DHS and RHS survey findings, respectively.
[d] GNI PPP refers to gross national income converted to "international dollars" using a conversion factor for purchasing power parity. International dollars indicate the amount of goods and services one could buy in the United States with a given amount of money.
[e] The sum of public and private expenditures on health divided by the country's population. Expressed in US dollars.
[f] The ratio of the number of students enrolled in secondary school to the population in the applicable age group. It can exceed 100 when the number of students exceeds the population of that age group.
SOURCES: C. Haub, *2002 World Population Data Sheet*; World Bank, *World Development Indicators 2000*; and official government estimates for fertility.

lation will eventually decline (assuming there is no offsetting immigration).

The surveys confirmed that fertility was at or below replacement level in all but three countries in the region: the Kyrgyz Republic, Turkmenistan, and Uzbekistan (see Table 1). Fertility has continued to decline in nearly all countries surveyed. Recent government estimates show fertility ranging from 1.2 children per woman in Ukraine to 2.9 births per woman in Turkmenistan.

Women throughout the region usually marry and begin having children earlier than women in Western Europe; childbearing peaks between ages 20 and 24 and drops off sharply after that. Little childbearing occurs after age 30 in these countries; women typically spend the rest of their reproductive years trying to avoid pregnancies.

Mainly because of low fertility, population growth rates in the region are around zero or even negative, except in the Central Asian countries (see Table 1). This situation has become a major social and economic concern in the region. With population size stalled or shrinking, some policymakers consider family planning programs unnecessary and counterproductive and instead advocate for measures to encourage women to have more children.

Contraception and Abortion: Trends and Relationships

For several decades, the reliance on abortion as a means of preventing births has been a prominent aspect of reproductive health in the former Soviet bloc. Modern contraceptives are often difficult to obtain, of poor quality, and not promoted by policymakers or the medical community. In contrast, abortion is generally legal, relatively unrestricted, and available at little or no cost. Governments, donor agencies, and nongovernmental organizations have helped increase the use of modern contraceptives, contributing to declines in abortion rates, but abortion still plays an important role in limiting the size of families in the region.

Abortion Rates and Trends

The average number of abortions that women have over their lifetimes (also known as the total abortion rate) ranges from 0.6 per woman in Uzbekistan to 3.7 per woman in Georgia (see Table 2)—some of the highest rates in the world.

Table 2

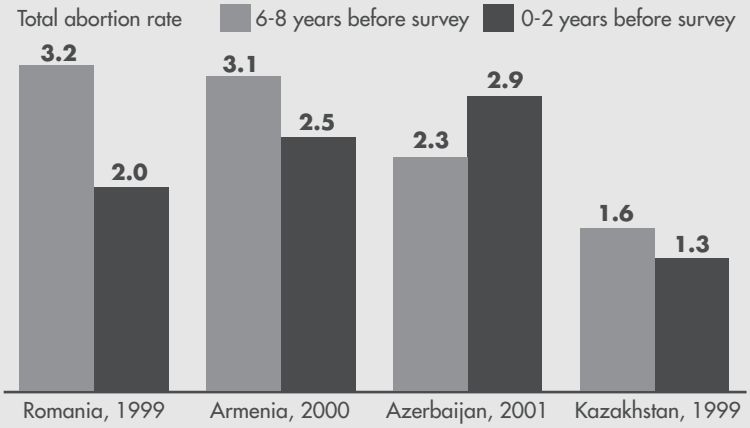
Reproductive Health Indicators From the DHS and RHS

	Survey and Year	Married Women Ages 15-44 Using Contraception (%)			Most-Used Contraceptive Method	Unintended Pregnancies[b] (%)	Unmet Need for Contraception[c] (%)	Women Ages 15-24 Reporting Premarital Sex (%)	Lifetime Number of Abortions per Woman	Mothers Receiving Prenatal Care, Beg. in 1st Trimester (%)	Births Outside Medical Facilities (%)	Infant Deaths per 1,000 Live Births
		Any[a]	Mod.	Trad.								
Eastern Europe												
Moldova	RHS 1997	74	50	24	IUD	42	6	26	1.3	73	0.9	—
Romania	RHS 1999	64	30	34	Withdrawal	55	6	41	2.2	60	2.0	32
Russia[d]	RHS 1999	73	53	20	IUD	66	12	71	2.3	83	1.8	—
Ukraine	RHS 1999	68	38	30	IUD	54	18	51	1.6	66	0.9	—
Caucasus												
Armenia	DHS 2000	61	22	39	Withdrawal	62	15	—	2.6	54	8.5	36
Azerbaijan	RHS 2001	55	12	44	Withdrawal	57	12	1	3.2	45	26.3	74
Georgia	RHS 1999	41	20	21	Withdrawal	59	24	1	3.7	63	7.8	42
Central Asian Republics												
Kazakhstan	DHS 1999	62	55	8	IUD	—	15	—	1.4	60	1.6	62
Kyrgyz Republic	DHS 1997	60	50	9	IUD	34	14	—	1.5	72	3.8	61
Turkmenistan	DHS 2000	55	47	8	IUD	—	19	—	0.8	72	4.2	74
Uzbekistan	DHS 1996	57	53	4	IUD	16	15	—	0.6	73	5.9	49
Western Europe[e]												
Austria	—	68	65	3	Pill	—	—	—	—	—	—	5
France	—	80	74	6	Pill	—	—	—	—	—	—	5

[a] Any method includes modern and traditional methods. Totals may not add due to rounding.
[b] Percent of pregnancies that are either unwanted or mistimed (wanted later).
[c] The percentage of fecund, married women who say they would prefer to avoid a pregnancy but are not using any method of contraception.
[d] Reproductive health data for Russia pertain to three urban areas only.
[e] Data for Western Europe are from C. Haub and B. Herstad, *Family Planning Worldwide 2002 Data Sheet*.
SOURCES: Demographic and Health Surveys (ORC Macro) and Reproductive Health Surveys (CDC).

Figure 2

Trends in Abortion Rates in Selected Countries



NOTE: The total abortion rate is the number of abortions a woman would have in her lifetime if she experienced current age-specific abortion rates.

In most countries, the rates derived from the survey data were higher than the governments' reported rates, reflecting some underreporting in the governments' statistics.

In most countries, abortions are most common among women ages 20 to 34. Most women who reported having an abortion said that they did not want and could not afford another child. The vast majority of abortions follow unintended pregnancies, which mainly occur among women who do not use contraception or who use traditional methods that have relatively high failure rates. Between 71 percent and 90 percent of unintended pregnancies end in abortion, indicating that women are strongly motivated to avoid an unplanned birth.

In seven of 11 countries surveyed (Armenia, Georgia, Kazakhstan, Moldova, Romania, Russia, and Uzbekistan), abortion levels declined during the 1990s. The surveys asked women for a full pregnancy history, including their experiences with abortion. Trends in abortion were measured by looking at the abortion rate 6 to 8 years and 0 to 2 years before the survey. Abortion rates fell between 15 percent and 38 percent—a marked change in a relatively short period (see Figure 2). Most of the decline occurred among women under age 30 and was associated with increased use of modern contraceptives.

Still, most women continue to view abortion as an acceptable means of birth control, which may put their health at risk: Although abortion is legal, some abortions take place outside of medical facilities, leading to complications and even deaths. Vital statistics in Eastern Europe and Central Asia indicate that between 15 percent and 50 percent of maternal deaths are related to abortion.[2] Moreover, women's responses to survey questions about postabortion medical problems revealed more complications than had been reported elsewhere, suggesting that the quality of service is a problem.

Contraceptive Use

Married women's use of contraception, whether modern or traditional methods, ranges from a low of 41 percent in Georgia to 74 percent in Moldova, with the highest rates found in Eastern European countries (see Table 2). Couples continue to rely heavily on traditional methods of birth control, particularly withdrawal and periodic abstinence. In several countries, such as Romania and the Caucasus countries, traditional methods account for more than half of all contraceptive use. Because these methods are less effective than modern methods, rates of failure and discontinuation are high, leading to large numbers of unintended pregnancies.

Modern methods account for a higher share of contraceptive use in Central Asia, where intrauterine devices (IUDs) are popular, and modern methods are more commonly used in urban than rural areas. As in other parts of the world, the higher the level of women's education, the more likely they are to use a modern contraceptive method.

Women in the region generally know that specific contraceptive methods exist, but they often do not know where to obtain them, how to use them, or how effective they are at preventing pregnancy. Although more women use modern contraceptives today than a decade ago, relatively few women use oral contraceptive pills, mainly because of widespread misinformation about health risks and side effects, even among health providers.

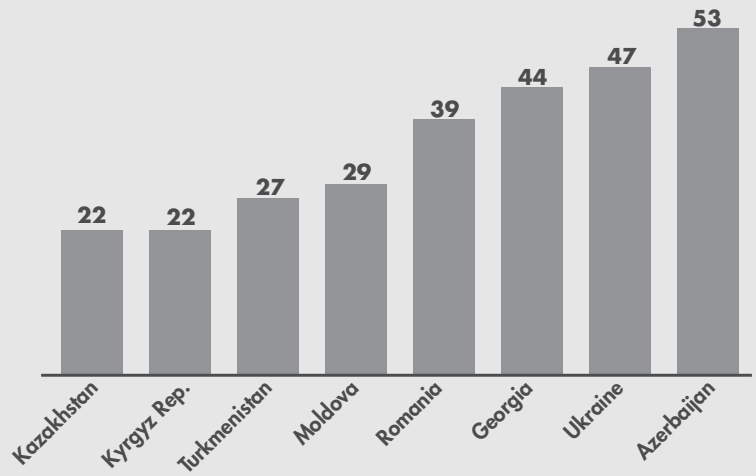
In addition, while most survey respondents said they did not want more children, few couples use long-term or permanent methods of contraception, aside from IUDs. In contrast, female sterilization is the most commonly used method among married women in many other parts of the world. Female sterilization was illegal until recently in the region; health systems still do not pro-

mote it, and most providers have limited training in the procedure. Training programs to update providers' knowledge of all contraceptive methods are under way.

One measure of the need for family planning is the proportion of married women who say they would prefer to avoid a pregnancy but are not using any method of contraception. Demographers refer to these women as having an unmet need for contraception. In six of the 11 countries surveyed, 15 percent or more of married women have unmet need (see Table 2). Unmet need is highest in Georgia—which also has the highest abortion rate—and is generally higher among rural women. If women using traditional methods, which are generally less effective, were added to those with unmet need, the percentage of women potentially in need of modern contraception would be considerably higher (see Figure 3).

Figure 3

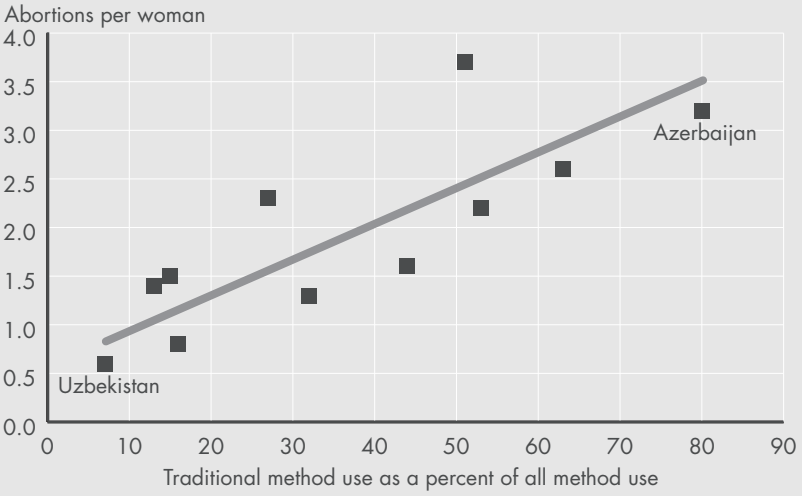
Potential Need for Modern Contraceptive Methods*



*Includes married, fecund women who say they would prefer to avoid a pregnancy but who either are not using any contraception or are using a traditional method such as withdrawal or periodic abstinence.

Figure 4

Relationship Between Use of Traditional Contraceptive Methods and Abortion Rates



Links Between Contraception and Abortion

In all of the surveyed countries, there is a clear relationship between abortion and use of traditional contraceptive methods: The greater the ratio of traditional methods to all methods used, the higher the level of abortion tends to be (see Figure 4).

A simulation using data from Armenia, Kazakhstan, the Kyrgyz Republic, and Uzbekistan showed that if women using traditional methods and those using no method but seeking to avoid a pregnancy were to use modern contraception, abortion rates would decline by between 55 percent and 64 percent, more than halving the number of abortions in those countries.[3]

Reducing women's reliance on abortion will require increasing contraceptive use overall, shifting to more effective contraceptive methods, and encouraging more consistent use of methods by improving the information and services provided. Women's attitudes about contraception lend support for these changes. About three-fourths of women in Azerbaijan, Moldova, and Romania say they want more information about contraception; in Georgia, more than half want more information. A greater proportion of young women, never-married women, and women using condoms want more information, emphasizing a need for educational efforts among young adults. In much of the region, young unmarried women have less access to family planning and reproductive health services than married women do.

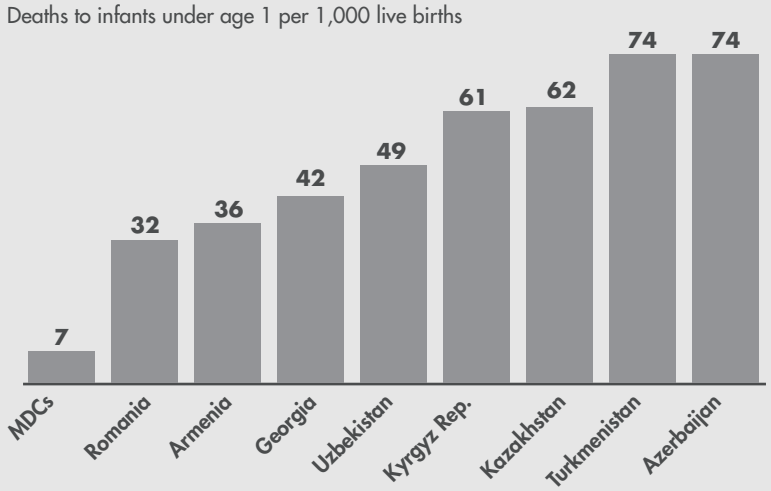
Maternal Health

The health of mothers is an important measure of well-being, but verifiable estimates of maternal deaths are hard to obtain. Although the vital registration systems in the former Soviet bloc countries are comprehensive, they share a common history

Figure 5

Infant Mortality Rates in Selected Countries

Deaths to infants under age 1 per 1,000 live births



MDCs = More developed countries.

SOURCE: CDC, Reproductive Health Surveys; ORC Macro, Demographic and Health Surveys; and PRB, *2002 World Population Data Sheet* (for MDCs).

of underreporting and misclassification of deaths. Death rates related to pregnancy and childbirth in Eastern Europe and Eurasia are estimated to be at least twice as high as those in Western Europe.[4] Complications from abortions, especially those performed under unsafe conditions, are among the leading causes of maternal death.

According to the survey data, the vast majority of deliveries take place in health facilities and nearly all are attended by trained medical professionals, except in Azerbaijan (see Table 2, page 3). Similarly, the vast majority of pregnant women in the region receive prenatal care, with the exception of women in Azerbaijan. Use of postpartum care, however, is substantially lower than use of other maternity care: In three of five countries for which data were available, less than 50 percent of women—and only 11 percent in Georgia—reported receiving a postpartum exam following their most recent birth.

Infant Health: New Data on Mortality

As the health of mothers and their infants is linked and they depend on similar health services, infant mortality rates are also considerably higher in the region than in Western Europe (see Table 2, page 3, and Figure 5). In Central Asia, the surveys found infant mortality rates to be as high as those in some countries of South Asia and sub-Saharan Africa.

The surveys showed that rates of infant mortality are substantially higher than the official rates—four times higher in Azerbaijan, and more than 1.5 times higher in Romania, Georgia, and Uzbekistan. The differences are due to weaknesses in reporting systems as well as to differences in how a live birth is defined. The DHS and RHS surveys used standard World Health Organization definitions that many governments in the region have been slow to adopt or implement.

As in other parts of the world, the surveys revealed that children born to less-educated mothers or born less than two years after a sibling's birth were more likely to die as infants. The findings indicate a continuing need for education on birth spacing and for the availability of reliable reversible methods of contraception.

Use of Preventive Health Services

Many women in Eastern Europe and Eurasia have limited access to preventive health services, particularly screening for cervical cancer. Regular Pap smears can dramatically reduce the probability of developing invasive cancer, but most women in the region are not aware of cervical cancer screening or have never been tested. Fewer than 50 percent of sexually active women in Moldova and Romania reported ever having had a Pap test; in Azerbaijan and Georgia, fewer than 5 percent of women reported having had the test.

Routine gynecologic exams are recommended for all women of reproductive age and should include Pap smears and counseling on breast self-exams, family planning, and STI prevention. The surveys show that health exams are not done routinely and that annual screening rates are quite low. Sustained educational campaigns for the public and changes in health providers' practices are essential for reducing disabilities and deaths among women.

Sexually Transmitted Infections and HIV/AIDS

Since the early 1990s, many countries in the region have experienced major epidemics of sexually transmitted infections (STIs), particularly syphilis. The steepest recorded increases during the 1990s were in Russia, Kazakhstan, and the Kyrgyz Republic, respectively. Rates in the Caucasus region and Romania, though higher than in

1990, remained low by comparison.[5] As in other areas, STI screening and reporting are seriously affected by the lack of resources in the health system.

Countries in Eastern Europe and Eurasia are also facing emerging HIV/AIDS epidemics. Though almost unheard-of a decade ago, HIV/AIDS cases increased dramatically in the latter half of the 1990s, and the Joint UN Programme on HIV/AIDS estimated that 1.2 million people in Eastern Europe and Central Asia were living with HIV at the end of 2002.[6] Intravenous drug use has been the main mode of transmission, but infection through sexual contact is increasing, particularly among young people and the growing number of sex workers.[7] International AIDS experts have warned that the epidemic may quickly spread from these subgroups to the general population.

Information and communication campaigns about HIV/AIDS and how to prevent its spread are needed. Although awareness of HIV/AIDS is high—at least 93 percent of women in six of the eight countries surveyed have heard of HIV/AIDS—fewer women know that a person can have HIV/AIDS without having symptoms, and even fewer know how HIV can be transmitted. Only half of women surveyed in Moldova and Romania spontaneously mentioned using condoms to prevent HIV; in five other countries where data are available, only about one-third did so. Though governments in the region have launched programs to ward off a growing epidemic, expanding coverage and reducing vulnerability among young people, who represent the largest group of newly infected people, remains a challenge.[8]

Violence Against Women

In several countries, the RHS provided the first national-level data on violence against women. This violence includes a wide range of behaviors and acts perpetrated against women, and most commonly occurs between men and their female partners (domestic violence). Factors contributing to the violence include gender stereotypes, women's economic dependence on men, cultural acceptability, and loose or nonexistent legislation to protect women.

In five of the six countries with data on physical abuse, between 15 percent and 29 percent of women who had ever been married reported that they had suffered abuse, and between 8 percent and 10 percent reported abuse in the last year (see Figure 6). In Romania, where the survey included men, male respondents reported inflicting abuse about as often as women reported being abused, providing a consistency in results that suggests the surveys' findings on this topic are reliable. In spite of the high level of disclosure in the surveys, however, few women reported physical abuse to police authorities or health providers.

Figure 6

Women Who Report Having Suffered Physical Abuse by a Spouse or Partner

NOTE: Data for Russia cover three urban areas only. All data represent lifetime experiences of abuse.

Since domestic violence affects women's physical, mental, economic, and social well-being, it also affects their reproductive health. Women subjected to domestic violence may be unable to use contraception effectively and consistently and may lack the control or negotiation skills that would enable them to plan their pregnancies, avoid STIs, and use preventive health services such as prenatal care.

Key Challenges

Improving reproductive health services, which are among the most cost-effective of all health services, can substantially improve the health of women and their infants.[9] Recent surveys show that reducing abortions and improving women's reproductive health will depend in part on increasing modern contraceptive use. Health services, whether public or private, should make contraceptives widely available and provide women with

For More Information

This brief is based on *Reproductive, Maternal and Child Health in Eastern Europe and Eurasia: A Comparative Report*, by the Centers for Disease Control and Prevention and ORC Macro. The full 238-page report can be obtained by contacting CDC:

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Centers for Disease Control and Prevention
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information and counseling to help them select the most appropriate and effective methods for their personal situations and childbearing preferences. Standards of care should include postabortion counseling so that women who have undergone abortions can learn about contraceptive methods and avoid repeat abortions.

Education and health promotion efforts are needed to overcome women's lack of awareness about important reproductive health topics, including family planning methods; the need for regular gynecological exams and follow-up medical care after a birth or an abortion; ways to prevent STIs and HIV; and where to go for help if they are abused. Special emphasis should also be placed on meeting the reproductive health needs of young adults—the next generation of parents.

Surveys like the DHS and RHS provide valuable data for developing new programs, evaluating existing programs, and reforming health care systems. In the future, more surveys and smaller comparative studies will be needed to monitor trends in infant and maternal mortality, abortion, contraceptive use, and other areas of reproductive health.

References

[1] A survey was conducted in the Czech Republic in 1993; the results (and more detailed results from the other 11 countries) are included in the full comparative report and individual country reports published by ORC Macro and CDC.
[2] World Health Organization (WHO), *Unsafe Abortion: Global and Regional Estimates of Incidence of and Mortality Due to Unsafe Abortion With a Listing of Available Country Data*, 3d ed. (Geneva: WHO, 1998).
[3] Charles F. Westoff et al., *Replacement of Abortion by Contraception in Three Central Asian Republics.* (Calverton, MD: Policy Project and Macro International, 1998); Charles F. Westoff, "The Substitution of Contraception for Abortion in Kazakhstan in the 1990s," *DHS Analytical Studies* 1 (Calverton, MD: ORC Macro, 2000); and Charles F. Westoff et al., "Contraception-Abortion Connections in Armenia," *DHS Analytical Studies* 6 (Calverton, MD: ORC Macro, 2002).
[4] Ken Hill et al., "Estimates of Maternal Mortality for 1995," *Bulletin of the World Health Organization* 79, no. 3 (2001): 182-93.
[5]Gabriele Riedner et al., "Recent Declines in Reported Syphilis Rates in Eastern Europe and Central Asia: Are the Epidemics Over?" *Sexually Transmitted Infections* 76, no. 5 (2000): 363-65.
[6]Joint UN Programme on HIV/AIDS (UNAIDS) and WHO, *AIDS Epidemic Update: December 2002* (Geneva: UNAIDS, 2002).
[7]UNAIDS/WHO, *AIDS Epidemic Update:* 13-16.
[8] UNAIDS/WHO, *AIDS Epidemic Update:* 13-16.
[9] World Bank, *World Development Report 1993: Investing in Health* (Washington, DC: World Bank, 1993).

Acknowledgments

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