



Child, Maternal, and Adolescent Health in Transition

BY GASPAR FAJTH AND MARC SUHRCKE

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Photos: Suzanne E. Grimman

Assessing achievements in child health and development among 193 nations, UNICEF's State of the World's Children, 2001 ranks in descending order the health status of children. In their ranking system, a higher number means better health indicators. The 27 post-Communist countries of Europe and Central Asia are found between the 175th—Czech Republic—and 61st—Tajikistan—positions. The basis for this ranking is the “under-five mortality rate,” an indicator that illustrates not just child health, but also the health and education of a child's mother. The indicator also bears implications for general accessibility to basic social services in a given country.

Were the same 27 countries ranked by their economic output they would fare less well among the world's nations. To a large extent, this is due to the substantial falls in economic output that have accompanied transitions to market-oriented economies, as well as the collapse of earlier institutions and economic and social structures. Between 1989 and 1995, gross domestic product (GDP) fell 15-75 percent across the region. And, although institutional development has progressed

Left—The health of children is inextricably linked to that of their mothers. This mother at an internally displaced persons settlement in Baku, Azerbaijan, walks four flights of stairs many times each day to bring water to her family for both cooking and bathing. There are only two outhouses and one well shared by hundreds of people. Right—Mothers of children in the hematology/oncology ward at the Almaty Pediatric Hospital in Kazakhstan bear the added burden of providing nutritious meals for their ailing sons and daughters. While childhood mortality rates are decreasing in many countries, they are on the rise in Kazakhstan.

considerably, by 2000 only three Central European countries reached or surpassed their 1989 levels of per capita output.

The under-five mortality rate rankings suggest, therefore, that countries in transition might possess a comparative advantage—relative to other countries at similar levels of economic development—in terms of maternal and child health. This very general snapshot, however, hides the fact that transition did have a substantial impact on the health of the young population, and not always has this change come for the better. Clearly, what was once a relatively homogenous region in terms of health indicators has diverged markedly within a very short period of time.

While this issue of *CommonHealth* focuses on the health of

children and adolescents, an accurate assessment of the current health status of children cannot be written without addressing maternal health, as the health of the mother directly relates to the health of the child. This article offers a brief review¹ of the inherited problems and the new challenges related to child, maternal, and adolescent health faced by NIS/CEE countries since 1989.

Child and Maternal Health

Infant Mortality Rates

Children who die young most often die before their first birthday. A country's infant mortality rate (IMR) is thus responsible for many of the differences in the under-five mortality rates noted above. Figure 1 shows changes in IMR between 1989 and 1999 for selected countries. The disparity in the region is apparent. For example, in 1999, Czech babies faced a five times greater risk of death than did Kyrgyz infants. Changes in the Czech rate are typical for transitional Central European countries—an initial increase followed by a steady decline. However, in other parts of the region, the IMR has been more resistant to improvement. In Russia, for example, infant mortality peaked in 1993-94 but, as of 1999, had subsided to only slightly below 1989 levels.²

Several countries in the southern belt of the region have experienced ethnic clashes and war, with impacts on pregnant women and the health infrastructure. For example, the IMR shot up in Bosnia-Herzegovina in 1992-93 when ethnic violence infested this country. The large fall in 1994—a year before the end of the war—presumably reflects worsening registration among high-risk groups rather than actual improvement. International efforts to save children and women by transporting them to other countries may have played a role as well.

Although official rates declined in Kyrgyzstan over the 1994-96 period, there is reason to believe that an increasing share of infant mortality is not being registered in this country, as well as in other parts of the region. This is confirmed by recent results from the demographic and health surveys (DHS), as well as by UNICEF surveys in some Central Asian and Caucasus countries. Potential inaccuracies in reporting should be kept in mind when reading statistics on many of these countries.

In conclusion, although measurement problems blur the picture, increases in the IMR appear to have been contained in most countries over the transition and, in a large number of countries, improvements have taken place. In part, this may be associated with earlier investment in women's education in the region. Another important factor in the IMR decline is the

significant fall in the total number of newborns. Between 1989 and 1999 the number of infants born annually decreased from 6.9 to 4.2 million—approximately a 40 percent decline in total—relieving some of the pressures on parents and existing health services.

Maternal Mortality

Infant mortality data is not only an indicator of child health, but of maternal health as well. An even more direct measure of the latter, however, is maternal mortality. Figure 2 (page 6) illustrates the long-term evolution of maternal mortality in Russia and Ukraine, where maternal mortality stopped declining with the onset of transition. As of 1999, neither country reached the international development goals given in the figure. Hence, in some cases transition seems to be associated with adverse departures from longer-term trends. Maternal mortality also remains an issue in the Caucasus and Central Asia: Azerbaijan for instance had the highest rate—59 deaths per 100,000 live births—of the 21 countries for which data is available.³

But, not all of these “departures” have been for the worse. Abortion, a major cause of maternal mortality, has mostly declined from very high pretransition levels, although rates continue to be excessive. In Russia and Belarus, for example, there were 180 and 141 abortions, respectively, for every 100 live births in 1999, compared to a rate in the European Union

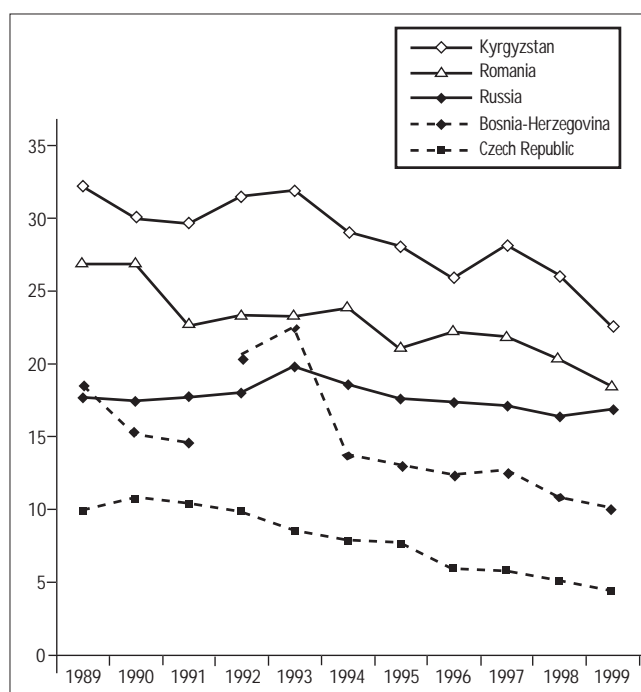


Figure 1: Infant mortality rates per thousand live births.



of about 20. Both Bulgaria and Romania still had a rate of around 100 abortions per 100 live births at the end of the 1990s, very similar to the Baltic states. Estonia—with the third highest rate in the whole region—registered 136 abortions per 100 births in 1999.⁴

Anemia Among Pregnant Women

Figure 3 shows a further indicator of material and child health: the incidence of anemia in women at term. In virtually all countries listed in Figure 3, the percentage of anemic complications has increased. (No such data is available for Central European countries). In 1999, the worst situation was recorded in Moldova, where almost half the women at term were anemic at birth. Surprisingly two relatively advanced economic reformers follow Moldova in high rates of anemia, namely Lithuania and Estonia, with 31 and 24 percent, respectively.

In part, these figures reflect declining quality of maternal nutrition and increasing poverty among the population of these countries, conditions that cause health problems among children as well. Poverty alleviation and public health measures clearly have a role to play here. For example, the fortification of wheat with iron is a cheap and efficient way to combat anemia, and is beneficial to both mother and child. An insufficient micronutrient intake by a mother reveals itself through lower birth weight or complications at birth. If, for example, a mother suffers from a lack of iron—anemia—this affects the child not only because it increases the risk of hemorrhage and other complications during birth, but also because children

born to anemic mothers are more likely to be anemic themselves. Anemic children suffer from lethargy and a lack of concentration; the onset of puberty may exacerbate this condition in girls.

Child Nutrition

The question is, then: Are there any signs that worsening maternal nutrition has trickled down to children's nutritional and health status? Recent DHS and UNICEF surveys shed some light on children's nutritional status by looking at the percentages of children "stunted"—low height for age—or "wasted"—low weight for age.⁵ WHO defines the severity of a population's malnutrition as "high" when stunting prevalence reaches 30 percent and wasting prevalence reaches 10, although it stresses that these levels are arbitrary. In a healthy, well-fed population, stunting and wasting figures of less than three percent are the norm. Judged by these criteria, Albania (stunted: 32 percent, wasted: 11 percent), Tajikistan (41 and 10 percent, respectively), and Uzbekistan (31 and 12 percent, respectively) have levels of child malnutrition that should be of immediate public health concern. Surveys carried out in Azerbaijan and Kyrgyzstan reveal that these countries are not far behind those listed above, with rates of stunting that are high by the standards of the rest of the region and far above the under three percent norm. About one in seven or eight children is classified as stunted in Ukraine, Russia, and Armenia—a rate higher than those found in Brazil or Turkey, for instance.

Although in the more developed parts of the region stunting and wasting are rare, micro-nutrient deficiencies are a region-wide issue. Iodine, for example, is vital to the development of the brain in very young and unborn children; serious deficits can lead to mental retardation. In many parts of the region—all the Central Asian countries, Russia, Ukraine, and Georgia, for example—the level of iodine deficiency disorders (IDD) is considered as mostly moderate and severe.⁶ This is clearly a preventable problem, given that highly cost-effective measures to combat IDD are well-known and applicable, as demonstrated by other countries in the region who succeeded in virtually eroding IDD, namely Bulgaria, the Czech Republic, and Slovakia.⁷

Immunization Rates

Prior to the collapse of communism NIS and CEE regions had impressive records in immunization cov-

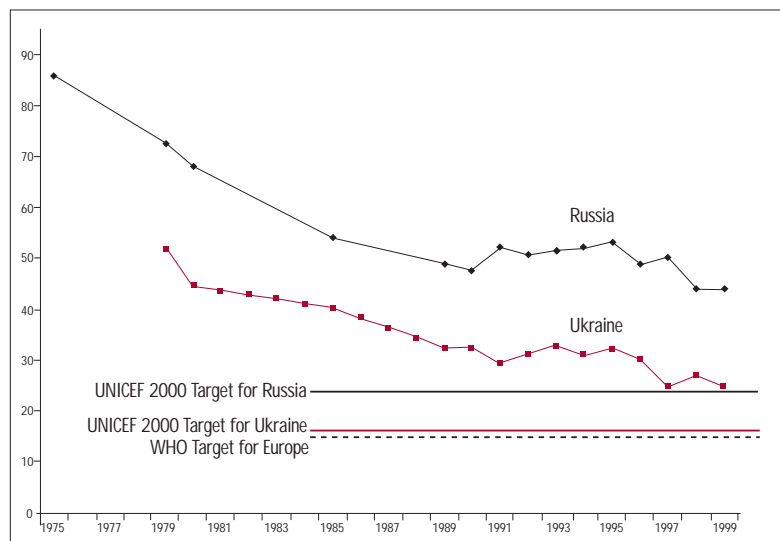


Figure 2: Maternal mortality in Russia and Ukraine from 1975-1999.

erage, which contributed to a substantial reduction in infectious diseases among children. In the CEE, high standards have mostly been preserved, even though some countries have had difficulty maintaining coverage during economic and political crises, particularly in the first half of the 1990s.⁸ In the southern belt of the region, immunization fell—in some countries like Georgia rates collapsed—but official data shows a rapid recovery in all cases thereafter, which begs the question: Does this mean that all children in the region are immunized? Again, survey results qualify some of the results from official statistics. A 2000 UNICEF survey in Albania found a 51.7 percent coverage rate of DPT3-immunization⁹ among children 12-23 months old, while official data reported a 96 percent rate in 1998. In Tajikistan, official statistics report a 98.7 percent coverage for DPT3, while survey results for 2000 indicate a mere 76 percent.

Although evidence is sparse on this issue, there is some indication that the decline of immunization in a few countries has mostly come to the detriment of the poor, who are already more vulnerable to infectious diseases—given their lack of proper nutrition—and are therefore most in need of immunization. In Kazakhstan, for example, a 1995 DHS survey found a nine percentage point difference in measles immunization rates between rich and poor, and a 20-point difference for DPT3.

Accidents and Injuries

Nevertheless, the largest mortality risk an infant faces once it survives its first few weeks is injury. Mortality rates from external causes—rather than illness—among young children generally did not increase during the 1990s,¹⁰ but are still at far higher levels than in Western, industrialized countries. This continues as a legacy of the pre-transition period, when death rates due to external causes and injury in the early 1990s were 2-2.5 times higher in the CEE and 4-5 times higher in the NIS than they are in the European Union. Only a small fraction of this difference has been reduced during the last decade.¹¹

Challenges for Adolescent Health

Forward-looking approaches to health increasingly embrace the view that adolescents are a unique population—as distinct as children and adults—with specific health concerns and needs that spring from their rapidly growing and changing bodies, as well as the social, sexual, and personal challenges that accompany the process of maturation. Research from industrialized and developing countries shows that targeting health interventions at this population and ensuring access to youth-

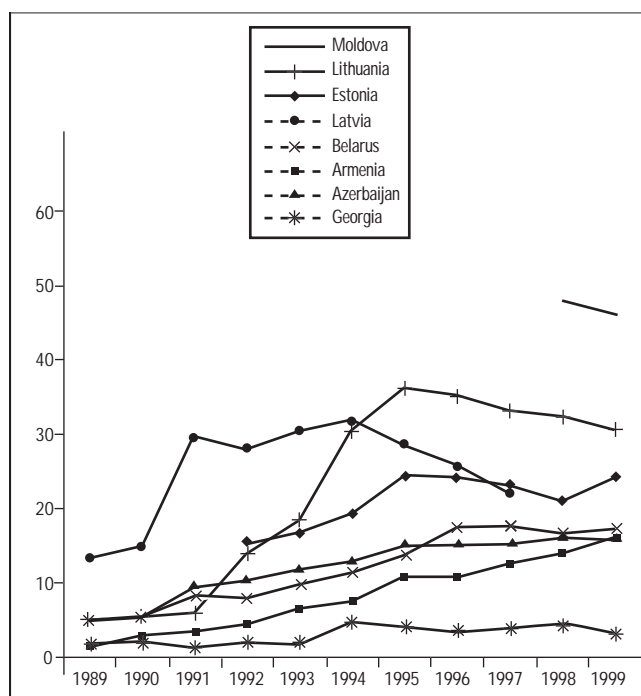


Figure 3: Percent of women with anemia in selected countries.

friendly health and development information contributes to lower morbidity and mortality in later life as well.

Adolescents growing up in transition countries face notable health risks. Poverty, inequality, weakening social cohesion, tensions around ethnicity, family, and gender roles, discrimination, and rapid social change—conditions found to varying degrees in different countries—are widely recognized as root causes of health and development problems among youth. These problems are being manifest in poor nutrition, substance abuse, early and unprotected sexual activity, infections, depression and anxiety, suicide, and injury due to accidents and violence.

Adolescent Mortality Rates and Suicide

The good news is that the rate of adolescent mortality—among 15- to 24-year-olds—has been diminishing in the majority of the transition countries during the 1990s. However, the staggering rise during this time of adult mortality has trickled down to younger cohorts.

In countries with the largest rises in adult mortality rates, such as Russia and Kazakhstan, there has also been an increase in adolescent deaths from both natural causes and injuries. In some countries where the adolescent death rate is down, like the Czech Republic, a relatively larger decrease in deaths from natural causes outweighs and obscures an actual increase in deaths from injury. Self-inflicted injury—in particular adolescent

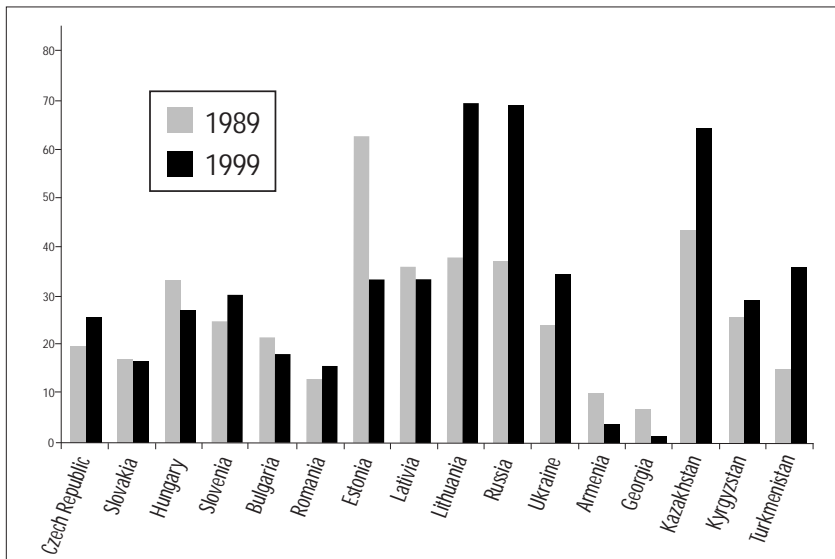


Figure 4: Suicide rates for young males aged 15-24, for selected countries, per hundred thousand relevant population.

suicide—has become a particular concern in many countries in the region (see Fig. 4). Suicide rates have almost doubled in Turkmenistan, Lithuania, and Russia, while the Central European countries have shown mixed outcomes. Youth suicide is often seen as a sensitive indicator of the state of “social cohesion,” which in turn is considered an important, broader determinant of health.¹²

Health Check-ups in School

Under the central planning regime—and still today—schools assumed a major role in preventive health checks for the young and were therefore valuable source of health-management information. The nature and quality of such data vary, but overall these records suggest that the disparities in the health status of youth are growing in the region.

Even in Slovenia, where the adverse impacts of transition have been relatively moderate and evenly experienced throughout society, polarization in health has taken place. School doctors, for instance, found a greater proportion of both very well and very poorly nourished students in 1996 versus in 1987. And, many countries exhibit greater economic disparities than those in Slovenia, as well as worse access to food.

Another snapshot of the change in adolescent health during the 1990s is seen in Figure 5, which is based on check-up records maintained by the Latvian Medical Statistics Bureau on youth aged 15-17. Only 55 percent of the teenagers examined in 1998 were found to be “healthy,” considerably fewer than the 67 percent in 1990. During the same time period, the proportion regarded as “not very healthy” grew from 26 to 40 percent.

Substance Abuse

Adolescence is often the time of life when people first confront choices related to intoxicating and potentially addictive substances: tobacco, alcohol, and drugs. To an extent, many young people shared in general patterns of smoking and drinking in the region before 1989; drug abuse, however, was rare in the closed and highly controlled societies of the socialist era.

Transition, however, has opened up borders, values, and opportunities, a process accompanied by stress and turmoil. One of the unfortunate results is an increased willingness of many young people to experiment with legal and illegal drugs, at the same time that these drugs have become more readily available. With privatization and economic liberalization, the tobacco industry in the region

has become dominated by large transnational firms, a shift that has meant the more sophisticated marketing of cigarettes. Branding now associates smoking with an affluent and advantaged Western life style or with other images that appeal directly to young people. And, according to the 2000 WHO Global Burden of Disease study, 25 to 33 percent of deaths of men aged 15-29 is related to alcohol, slightly more than the European average.

Adolescents’ drug and cigarette consumption increased in the second half of the 1990s in Europe—especially in transition countries. Consumption increases are particularly striking for illegal drugs. In 1999, one in five 15- to 16-year-olds on average reported having tried illegal drugs in nine CEE countries, up from one in 10 in 1995.¹³ About 10 percent of teenagers of this age in the Czech Republic, Poland, Romania, all three Baltic states, and in Moscow,¹⁴ reported having used a drug other than cannabis—amphetamines, LSD, ecstasy, heroin, or cocaine, for example—at least once in 1999, a figure exceeded only by the United Kingdom in the Western European part of the survey. CEE averages for both drug use and smoking in 1999 have clearly caught up with those for Western Europe. This suggests that while life expectancy at birth has improved in the more wealthy CEE countries, transitional times have brought threats to health as well.

Sexual Activity and Infections

A further “modern” health challenge for young people in the region is the sharp increase in sexually transmitted infections (STIs). Even before transition, sexual behavior and sexual hygiene practices were ill matched in many of these countries.

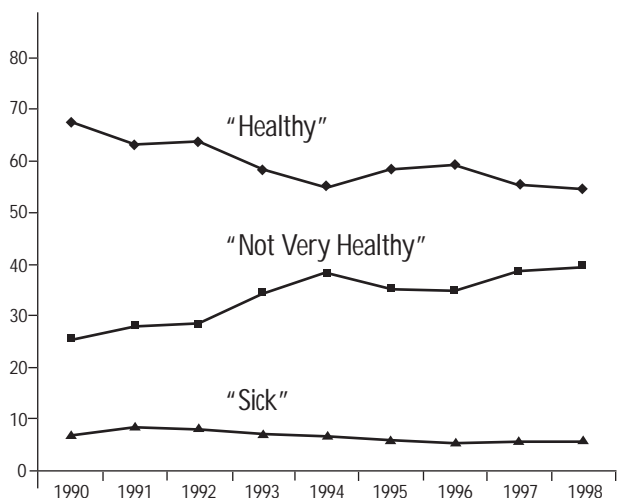


Figure 5: Results of check up records for Latvia from 1990-1998.

However, under communism, the combination of a highly controlled society and rigorous disease-management systems kept STI rates under tight control. When social and medical restraints were relaxed after 1991, it was only a matter of time before STI rates shot up. First the incidence of gonorrhea increased in Russia and then, from 1992 to 1994, syphilis began to spread. During the years from 1996 to 1998, gynecologists, dermatologists, and other specialists found that more than nine of every 1,000 young Russian women aged 18 to 19 were infected with syphilis. This serious disease, even when treated promptly and properly, can impair long-term health, including reproductive ability and the health of babies born to infected mothers. Figure 6 (page 11) shows the incidence of syphilis and gonorrhea among individuals aged 15-19 for selected countries between 1989 and 1999.

During the early 1990s, STI rates among adolescents shot up in Estonia, Russia—doubling its initial value, which was already the highest in the region—and Ukraine, while in Kyrgyzstan, STIs increased more gradually. By the end of the decade, however, all countries appear to have been able to reverse the trend, but most still remain above their 1989 levels. In contrast, Hungary—like other Central European countries—and Azerbaijan—well representative of the Caucasus—have been able to keep STIs under control and to even further reduce its incidence. It is important, however, to note that these rates are based on officially registered data and can therefore only be seen as the very lowest boundary of true prevalence. Furthermore, gender-disaggregated data even suggests that underreporting has increased significantly during the 1990s.¹⁵

The climbing trend of STI rates in the region is disturbing



Photo: Suzanne E. Grinnan

More than 30 million of the world's children go without immunization against common childhood diseases each year. Access to these vaccines has the potential to save as many as 4,000 children—such as this little girl in Sabirabad, Azerbaijan—every day.

both for what it now represents and for what it may portend. Most troubling is the pattern in countries such as Russia and Ukraine, where an initial wave of gonorrhea infection was succeeded by a surge in the more destructive syphilis, which is more recently giving way to increased HIV incidence rates. In December 2000, UNAIDS estimated 700,000 people to be living with HIV/AIDS in the NIS/CEE region, up from 420,000 a year earlier. Ninety percent of these people are from Russia or Ukraine, and almost half of them are thought to be less than 25 years old.

To date, the HIV virus has been largely spread by and among intravenous drug users (IDUs) through their sharing of syringes and needles, but the virus is far from being restricted to just this group of people. In Ukraine, for example, a quarter of the 30,000 officially registered HIV cases reported in the 1990s were not IDUs. Therefore, unless there is a substantive change in sexual behaviors and health practices, the risk that AIDS may yet stake a large claim on the youth of the region is very real.



Photo: Kathryn Ulan.

Appropriate healthcare in the first years of life helps ensure a healthy childhood and adolescence. Here, Dr. Peter Krcho examines year-old twins at the Kosice Faculty Hospital in Slovakia.

Transition Brings Challenges

The decade of economic and social transition in the NIS and CEE has been one of both adverse shocks and of newly gained opportunities—a promising time for growing up, but a period that has also posed new health risks for children and adolescents. Overall, prior to the transition, children, adolescents, and women in the region were endowed with relatively good health and adequate access to basic health services. However, there were some troubling traits in the health picture, including a much lower male than female life expectancy, extremely high abortion rates in most societies and injury rates among children and adolescents at a multiple of what was observed in the industrialized, Western countries.

The transition period has seen a depreciation of existing healthcare assets and a growing inadequacy of former approaches to health. Prior to transition, health was understood in medical rather than social terms and there was a bias toward curative instead of preventive health interventions. The responsibility of individuals for their own health was not em-

phasized. Women in their unique role as crucial partners for health providers and the major purveyor of health in the family—especially among children and adolescents—were often neglected. In terms of psychosocial health, the environment was oppressive rather than supportive. Although basic public healthcare was widely available, youth were not identified as a distinct health population nor treated with the respect and warmth so important in a client-provider relationship at this age.

Despite unfavorable socioeconomic circumstances during the 1990s, many countries made good progress in terms of child and maternal health, as well as in securing their adolescent population safer and more supportive environments. Infant mortality rates have fallen in most countries, and the rates of Slovenia, the Czech Republic, and Croatia now compare favorably with those in Western Europe. Child and adolescent mortality rates due to accidents have fallen in 13 countries—out of 22 for which sufficient data is available—including the Baltics, where they were notoriously high. Youth suicide rates have gone down in some countries, including Hungary, where the rates were always high. And strikingly high birth rates among teenage mothers have declined in Romania and Bulgaria, while the number of abortions among young women has diminished in Russia—although it is still the highest in Europe.

These positive results need to be strengthened while negative trends are confronted. The latter include a deterioration in access to basic health services in the poorer countries, as well as among disadvantaged populations in richer countries. These prevent many NIS/CEE countries from reaching WHO and UNICEF targets for child and maternal health and catching up with Western Europe. Armed ethnic conflicts have been ravaging parts of the region; sex industry and trade are growing alarmingly as confirmed by increasing STI rates; and drug trafficking and use—a new and burgeoning problem—have triggered HIV outbreaks in several countries. These risks should be addressed with urgency. In many cases, prevention programs are nonexistent, weak, or poorly coordinated. International donors and institutions can help through research and advocacy, by supporting the development of local capacity and by facilitating links and partnerships with countries—in and outside the region—where effective prevention strategies have been implemented.

Forward-looking approaches are attempting to provide responses by involving youth in the design and implementation of appropriate and cost-effective health strategies. One of the key tools is encouraging adolescents to participate in efforts

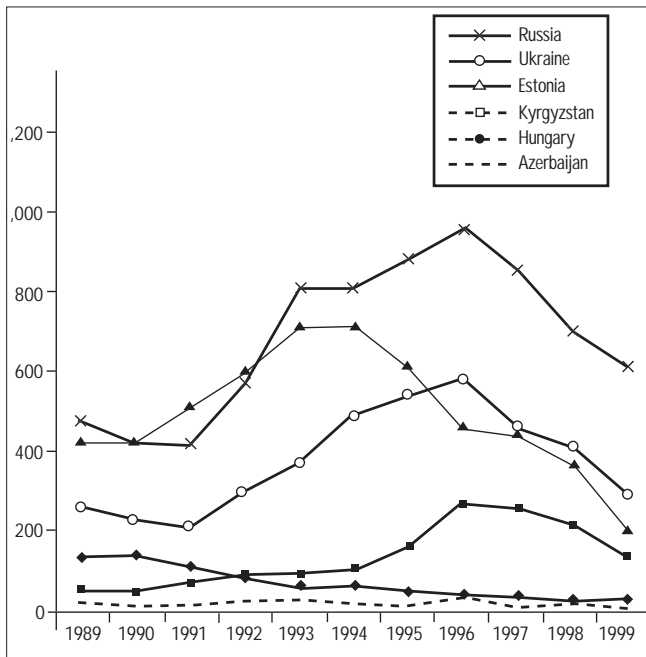


Figure 6: Newly registered cases of syphilis and gonorrhea per hundred thousand for adolescents 15-19 years of age.



Photo courtesy of Elena Zaitseva.

Teaching children the value of good health and reinforcing these messages in non-clinical settings, such as health fairs like this one in Dubna, Russia, can help children understand how lifestyle choices made today can impact their future health.

to address health issues, but this also means that there is a responsibility to listen to what young people have to say.

Just as “good health” means much more than the mere absence of disease or infirmity, “good health policy” requires action on various fronts beyond the ministry of health. Ministries with responsibility for education, social welfare, the environment, finance, and health need to work with each other—as well as with healthcare professionals and the general public—to further the health status of the region’s adults and children. ■

References

1. The paper relies on data and analysis from UNICEF’s MONEE project, which monitors the social side of transition in CEE and NIS since 1992. For a more general account of health in the CEE and NIS, see the health chapter in the forthcoming publication *UNICEF, A Decade of Transition, Regional Monitoring Report No. 8* (UNICEF Innocenti Research Centre, Florence, Italy, 2001).
2. For a report that focuses on young people in transition see *UNICEF, Young People in Changing Societies, Regional Monitoring Report No. 7* (UNICEF Innocenti Research Centre, Florence, Italy, 2000).
3. The situation of women in transition is covered in *UNICEF, Women in Transition, Regional Monitoring Report No. 6* (UNICEF Innocenti Research Centre, Florence, Italy, 1999).
4. These publications can be downloaded from www.unicef-icdc.org.
5. It should be noted that Russia moved from the Soviet definition of “live birth” to the WHO concept in 1993, while all Central Asian countries still use the Soviet concept, which underestimates infant mortality figures by 10-25 percent.
6. See *UNICEF, A Decade of Transition, Regional Monitoring Report No. 8* (UNICEF Innocenti Research Centre, Florence, Italy, 2001), for a summary of the evidence on this issue.
7. *Ibid.*
8. Stunting (low height given age) reflects long-term chronic malnutrition, and builds up over time. Wasting (low weight given height) reflects a current nutritional crisis and can occur quickly. Both are affected by disease as well as food intake. Malnutrition reduces energy and mental concentration and hence school performance, and increases various health risks. It is therefore a threat to child development and even survival.
9. *UNICEF, A Decade of Transition, Regional Monitoring Report No. 8* (UNICEF Innocenti Research Centre, Florence, Italy, 2001).
10. *Ibid.*
11. As for the immunization of diphtheria, pertussis, and tetanus, Estonia and Latvia have the least coverage in the entire region in 1999—72.7 and 83.9 percent, respectively.
12. This involves immunization against diphtheria, pertussis, and tetanus.
13. Except for the very early phase of transition.
14. For a comparison of child injury deaths in the EU and in Central and Eastern Europe, see *UNICEF, A League Table of Child Deaths by Injury in Rich Nations, Innocenti Report Card No. 2* (UNICEF Innocenti Research Centre, Florence, Italy, February 2001).
15. Indeed, the fact that suicide rates are relatively low in the Caucasus—which are often characterized as “socially cohesive” societies—can be interpreted as evidence in favor of the hypothesis that social cohesion is good for health.
16. The transition countries covered are: Czech Republic, Croatia, Estonia, Hungary, Lithuania, Poland, Slovakia, Slovenia, and Ukraine. Western Europe: Cyprus, Denmark, Finland, Ireland, Italy, Malta, Norway, Portugal, Sweden, and the United Kingdom.
17. Data for Moscow was not available for 1995.
18. *UNICEF, Young People in Changing Societies, Regional Monitoring Report No. 7* (UNICEF Innocenti Research Centre, Florence, Italy, 2001).