

Child Health Trends in Central and Eastern Europe

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Overall Health Conditions

The well-known events that resulted in worsening economic and social conditions all over Europe after 1989, led to a parallel decline in health, which deteriorated only moderately in central and some parts of eastern Europe¹ during transition, but suffered a decline as severe as has never been witnessed in times of peace in other countries and especially in Russia and Ukraine. The dramatic rise in mortality recorded since 1989 has been selective, sparing women more than men, affecting the young and the elderly only moderately but taking a severe toll especially among men of working age. Deaths of males aged 20 to 39 in Russia rose by no less than 70% between 1989 and 1993, and by over 50% in the 40 to 59 group. The rise in Ukraine was a uniform 30% for both groups over this period. It was smaller, though still significant, elsewhere, for example about 11% overall in Bulgaria, 15% in Romania, 8% in Poland.

Mortality increased significantly also among women of working age especially in Russia and Ukraine over this period, but starting from much lower levels it affected a smaller number of women. Life expectancy at birth among men in Russia declined from 64.2 years in 1989 to 59.0 in 1993 and to 57.3 in 1994,² virtually all of it due to deaths in the 20-59 age group. The life expectancy of Russian women declined less (1.8 years between 1989 and 1993, compared with 5.2 for men) so that by 1993 women outlived men on average by a startling 14 years. On the other hand, life expectancy declined less, stabilized, or even increased in some other countries of the region, as shown in Table 1.

Table 1. Change in life expectancy at birth (years) 1989-93³

	MEN	WOMEN
Russia	- 5.2	- 1.8
Ukraine	- 2.0	- 1.0*
Romania	0	0.5*
Bulgaria	- 1.0	0.0
Czech Republic	0.5	0.7*
Slovakia	1.5	1.3
Hungary	- 1.0	- 0.1*
Poland	0.6	0.5

* 1989-1992

That mortality is only the tip of the iceberg may be little consolation.⁴ The extent of decline in morbidity is largely unknown as a probably increasing number of sick persons no longer attend public health services to be counted. Only the most serious of the infectious diseases continue to be monitored, including diphtheria, poliomyelitis, tuberculosis, measles, or pertussis since these are subject to obligatory notification and some degree of control through vaccination. The picture presented by these statistics provides little comfort.

The incidence of measles and pertussis did not yet rise consistently over the period, but polio, diphtheria and probably tuberculosis are increasing. A substantial number of polio cases, now almost eradicated in western Europe, occurred in Azerbaijan, Tajikistan and Uzbekistan and a polio outbreak was reported in 1995 in Chechnya (Russian Federation), with so far 140 cases. The number of diphtheria cases and deaths rose sharply in most republics of the former Soviet Union, though not in central Europe (see box).

Similarly, the reported incidence of tuberculosis in Russia doubled between 1993 and 1994, and increased (though more steadily) in Ukraine. The situation here is obscured by defective statistics.⁵ The prevalence of tuberculosis is unknown in Georgia, for example, but, based on the recorded number of cases of tuberculous meningitis which went up ten-fold between 1990 and 1993, local staff consider that tuberculosis also has greatly increased, a finding attributed to adverse economic and social conditions and the difficulties of providing medical care. The fact that the majority of cases treated at the central Tuberculosis Institute in Tbilisi are children aged 0 to 3 years is a cause of concern. In Croatia, UNICEF reported a 40% increase in the incidence of tuberculosis in 1992 as compared with the previous year.

Causes of Declining Health Conditions

The immediate causes of this increased mortality (i.e. the cause entered on the death certificate) were most often conditions of the heart and circulatory diseases and, in Russia at least, 'external' causes of death which include poisoning, accidents, suicide and homicide. Cancer has been prominent as a cause of death in central Europe. Infectious and parasitic diseases, described more fully below, have taken a rapidly increasing toll, but the absolute number of people who die from this cause is still relatively small.

Diseases of the heart and circulatory system have been especially linked with the concurrent changes described elsewhere⁶: drastic falls in employment and income, deteriorating or, in the trans-Caucasian countries for example, disintegrating social security systems, further decline in the already unsatisfactory dietary standards, high and possibly increasing consumption of alcohol and tobacco, adverse environmental conditions, or stress. Mental stress is thought to take its toll particularly among working age men, concerned by their inability to earn and maintain their families, more than among women, the elderly or children. The public health care services that would normally have dealt with these pathological conditions have themselves seriously deteriorated.

Public Health Services

The virtues and defects of the health care system in these countries are by now well documented. It was a broadly-based system, providing simple care at village level, with increasing sophistication at district, regional, up to the central level. But while few people were completely without health care, which at its best was as good as anything offered in the West, the quality was uneven. Buildings were often unsuitable (many without warm or even running water), essential medical equipment in short supply, the geographical distribution unrelated to requirements. The quality of medical staff also greatly varied. Many were certainly inadequately trained.

The economic crisis, from 1989 onwards, led to further deterioration in services that had never been fully satisfactory. The emerging difficulties in the republics of the former Soviet Union varied from one republic to another, but the situation described below in respect of Georgia is fairly typical:⁷

- drastically reduced health budgets. (USD 3 per capita in 1995);
- accelerated deterioration of buildings and equipment;
- lack of fuel to heat hospital;
- no meals provided;
- scarcity of essential drugs, now mainly sold on the open market at prices that many people cannot afford (53% of the population do not have financial access to medical care);⁸

The Rise of Diphtheria in Eastern Europe

Once a serious threat to child health, diphtheria has gradually been brought under control in western Europe, with no more than 160 new reported in 1980 and a mere 6 in 1990. In the former Soviet Union, similarly, diphtheria appeared to diminish, but from 1980 onwards, the increase took on epidemic proportions: nearly 6,000 cases in 1992, 18,000 the following year and 43,000 in 1994. Indications for 1995 point to a doubling of this number (see Figure). Three countries, Russia, Tajikistan, and Ukraine, accounted for 95% of new cases in 1994, but the disease has meanwhile spread to the remaining republics of the former Soviet Union. Only a few cases have been notified so far in central, south-eastern and western Europe (Albania, with about 70 cases between 1992 and 1994, is an exception) nor have the number there shown a tendency to increase so far. However, prevailing population movements evidently favor a spread of the epidemic, so the utmost precaution is required. Children have been the main victims in one group of countries, including Armenia, Azerbaijan, Georgia, Moldova and Tajikistan, adults in another, much larger group, comprising Belarus, Russia and Ukraine. Case fatality overall has varied among countries from 3 to 17%. Why age groups should be so differently affected or fatality vary so widely is not known. A temporary decline in immunization coverage in 1991 and 1992 is only one of many factors, since it would have affected only a few, very young children. Coverage has never been complete in the former Soviet Union as a result of an excess of contradictions, defective vaccines (partly because of insufficient cold storage), deficient records, or lack of boosters for adults. Other factors favoring the spread of diphtheria include uncontrolled population movements and the absence of natural immunity in the younger generations. Even in western Europe, between 50 and 90% of adults are susceptible to diphtheria. Research is underway on the causes of the epidemic. It is certain, meanwhile, that massive immunization of adults as well as children is required to halt it. A start has been made with mass vaccination by the governments concerned in eastern Europe. UNICEF, together with the International Federation of Red Cross and Red Crescent Societies and WHO, has launched an emergency appeal for funds in support of national endeavors.



Source for 1974/6 to 1993: WHO, EPI, Information, March 1995; CDC, Atlanta, for 1994

- inadequate salaries, so that staff rising or spend time exploring alternative sources of income rather than attending their duties (in countries like Tajikistan, many doctors had been recruited in Russia and elsewhere and have now returned to their countries);
- increased demand by medical staff for payment from patients; (in Latvia, for example, patients must pay a quarter of the usually modest medical charges, since August 1995; but about one in eight patients in one hospital that was investigated were unable to do so;⁹
- lack of transport to medical facilities, a problem particularly in rural areas.

Public health care services are now operating well below capacity in terms of beds and staff. Particularly in rural areas, hospitals are often empty, and many are closed altogether, shunned by a public that can no longer hope to receive adequate care.

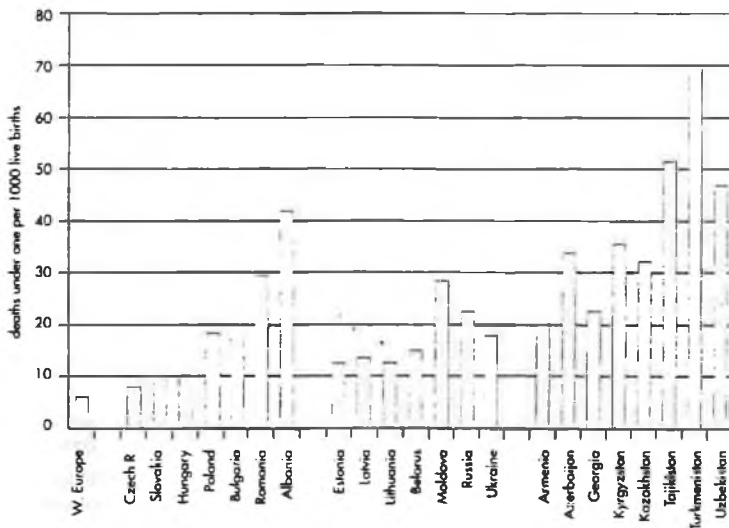
Child Health

If the explanation of the rise in adult mortality in eastern Europe is correct, then children - less exposed than their parents to stress or alcohol, for example - should also be less liable to morbidity or high mortality, and indeed infant and child mortality have risen much less over the last four or five years than adult mortality in countries such as Russia or Ukraine. Most of the central European countries (the Czech Republic, Slovakia, Hungary) as well as Bulgaria and Slovenia, after some hesitation, experienced a resumption of the decline in infant mortality. The situation was less favorable elsewhere. A few countries, including Belarus, Moldova, Ukraine and Romania saw a steady increase in infant mortality between 1989/1990 and 1994, as did Russia up to 1993,¹⁰ although the rate of increase by no means equaled that of adults. Elsewhere, infant mortality rates fluctuated or stabilized around their pre-transition 1990 levels.¹¹ However, this patten, which is similar for children to the age of 19 should be seen in the perspective of the overall gap in health conditions between eastern and western Europe. The gap, which had been very large at the end of World War II, narrowed rapidly at first, and then more gradually. Central European countries, in particular, were gradually approaching the West as regards infant mortality,¹² but Albania, some of the Caucasian republics and especially the central Asian republics, with infant mortality rates up to ten times higher than in the average western European country, remained still far behind. Transition has done nothing so far to reduce or close this gap (Figure 2). Intervention is now required at all stages of child health care, from before the baby is born, through attendance at birth, improved breastfeeding and nutrition in general. Early childhood disease must be averted or treated, including in particular acute respiratory infections, diarrheal diseases, other infectious diseases, such as diphtheria or tuberculosis, and iodine deficiency disorder. Given the currently defective public health services, UNICEF, WHO and other international humanitarian associations have identified priority needs in the region and provided help.

Adverse social condition among some pregnant women (poor diet, smoking, alcohol consumption, physical and mental stress) may result in low birth weight which, in turn, greatly reduces a child's chance of surviving the first years of life. Nutritional studies in Russia, for example, have shown deficiencies in mothers not so much in energy or protein as in specific micronutrients, including folic acid, iron, calcium, vitamins B1, B2 and B6.¹³ Over the 1989-1993 period, the rate of low birth weight increased sharply in Bulgaria and Romania and more moderately in Armenia, the Czech Republic, Lithuania, Russia and Slovakia.¹⁴

Breastfeeding has an unimpressive record in most of central and eastern Europe, as until recently in the West. Official policy has done little until now to encourage women, already traditionally disinclined to breastfeed for more than a very few months. A typical hospital practice was to separate the baby from the mother for 24 hours after birth, feeding him/her with water, tea or juice. Feeding on demand was discouraged all the time.¹⁵ Adverse social conditions, especially bad diets and stress, are currently blamed for the very low breastfeeding rates. As a fairly typical example,

Central and Eastern Europe, Infant mortality rates, 1994
 Comparison with Western Europe
 (Rates adjusted in line with the WHO definition)



there was virtually no exclusive breastfeeding in Yerevan, Armenia, with only 24% predominant breastfeeding at 3 months, and 38% mixed feeding; corresponding figures at 6 months were 9 and 21%. Much can be done through both education and dietary supplements to help mothers breastfeed more effectively.¹⁶ The importance of a proper diet, beyond breastfeeding, is noted in a UNICEF report: "In eastern Europe, as elsewhere, infants, children and adolescents require proportionately greater intakes of proteins, vitamins, iron and other micronutrients, and are therefore particularly vulnerable to adverse changes in food intake. It is well known that even relatively short spells of severe undernutrition or micronutrient deficiencies can have serious implications for survival, present and future health status."¹⁷

Judging by the few weight and height data available in the region,¹⁸ not many children suffer from acute protein-energy malnutrition (wasting), but there are many with low height for age (stunting), often the result over the long-term of too little food combined with illness. In a survey carried out in Tirana, Albania, in 1991, about one third of children aged 0 to 2 years were undernourished in terms of weight for height. Reports from Bulgaria and Slovakia of significant increases in the number of overweight children, supported by food consumption survey data and nutrition studies, indicate another aspect of the problem: a decline, as a result of declining incomes, in consumption of the more nutritious foods, such as milk, meat, vegetables (in some areas) or fruit, which have simply become too expensive. People instead eat more bread and carbohydrates in general. The standard diet in the trans-Caucasian countries now consists of bread, tea, vegetables and most of the time not much else. This would not result, in reduced weight for height in children in the short term, but a likely result both in the immediate and the longer term is reduced resistance to disease. Growth monitoring with clinical examination of nutritional status, as well as food supplements, are essential first steps if the children are to be helped to a balanced diet and improved health. One particular aspect of malnutrition has in the past caught the popular imagination, namely iodine deficiency which may result in endemic goiter or cretinism. Iodine deficiency disorder (IDD) are endemic in most countries of the region. Children are especially exposed to IDD. The remedy is simple in normal times, based on iodine supplements added to salt or taking iodine in capsules. As a result of economic disruption and relaxation of controls, however, salt is no longer effectively iodized in many countries of the region, while capsules are beyond government or private budgets. Nor is there sufficient equipment in most countries to test and identify potential victims of IDD. This is clearly another case where international humanitarian assistance can be effective.

Food apart, adverse environmental conditions play their role in lowering resistance to disease: "The former Soviet Union was noted for its absence of motivation for environmental protection. Environmental protection agencies and laws certainly existed. Soviet standards were among the highest in the Given the absence of resistance in children as a result of bad diets, adverse physical environment or lack of effective health care, infectious disease such as diphtheria or tuberculosis take their toll.

Acute respiratory infections are the main single cause of disease among children under 15 in these countries and the greatly contribute to infant deaths.

Diarrheal diseases are common and account for a large number of infant deaths. It is estimated that over half of deaths from this cause could be avoided by timely and adequate medical intervention. However, as noted earlier, the public health care system short of medicine, specialized equipment for clinical testing and control, transport, and specialists - cannot cope.

International humanitarian assistance is of utmost importance for the control of respiratory and diarrheal diseases, the supply of medicines, vaccines and the management of immunization, including cold storage and technical know-how.

Notes

1. Central Europe here comprises the Czech Republic, Hungary, Poland and Slovakia; eastern Europe the remaining countries of the region, though south-eastern Europe, including Bulgaria, Romania and the former Yugoslavia, is occasionally distinguished in the text as a sub-division. The central Asian or trans-Caucasian republics and Kazakhstan, though counted for other purpose as belonging to Asia, are included here in eastern Europe.
2. This unconfirmed figure was given by the *New York Times*, 2 August 1995.
3. In countries with data available for 1993. Though complete figures are not available for other countries of the region, it is probable that life expectancy declined also elsewhere in the republics of the former Soviet Union.
4. One example: for every death of a child aged 0-14 in Armenia in 1991 almost 300 children in this age group attended a public health care institution.
5. Diagnosis is more rigorous in western Europe than in central and eastern Europe, a fact which may cause an upward bias in the figures reported in the latter regions, though it would not affect trends.
6. See, for example, Nell J. and Stewart E. *Death in transition: the rise of death rates in Russia since 1992*. UNICEF, International Child Development Center, Innocenti Occasional Papers, EPS 4S, Florence, 1994.
7. UNICEF. *Children and women in Georgia: a situation analysis*, Geneva, June 1994
8. UNICEF. *Summary report on the results and findings of household survey to ascertain health care demand and health expenditures in the Republic of Georgia*. Tbilisi, October 1995
9. Rich V. *Latvia ceases to provide free health care*. *Lancet* 1995; 346:433
10. *Infant mortality in Russia reportedly declined from 19.9 per 1000 in 1993 to 18.7 in 1994* (Cornia GA. *Ugly facts and fancy theories: children and youth during transition*. UNICEF, ICDC, Florence 1995).
11. Some of the fluctuation is probably the result of deficient statistics in conditions of rapid population movements and administrative faulty. A change in definition to match WHO recommendations may have further affected the data in some countries.
12. One explanation for the gap closing is that it is very difficult for many western European countries with infant mortality rates below 5 or 6 per 1000 to reduce these further, to an extent that infant mortality here is no longer an adequate indicator of changes in child health

conditions.

13. UNICEF. *Crisis in mortality, health and nutrition. Regional monitoring Report No. 2, International Child Development Center, Florence, 1994*
14. *The figures need to be treated with caution because of the possible change in some countries in definition of a live birth.*
15. Hekimian KM. *Infant feeding practices in Armenia: a study on breastfeeding, formula use and feeding during periods of diarrhea. UNICEF, mimeo, 1993; the finding are fairly typical of much of the region.*
16. UNICEF. *Emergency and beyond, a situation analysis of children and women in Armenia, Yerevan and Geneva 1994.*
17. UNICEF, *Crisis in Mortality, op.cit., p. 58.*
18. *Cf. for example UNICEF's situation analysis in Armenia and Georgia; UNICEF, Social Monitoring Report, op. cit. for the situation in Russia; McLean M. Nutrition survey of the refugee population in Slovenia, International Federation of Red Cross and Red Crescent Societies, 1993.*
19. *Government of Georgia and UNDP, Human Development Report, Georgia, Tbilisi, 1994, 47.*
20. UNICEF. *Children and women in transition: a situation analysis of Azerbaijan, Geneva, 1993*