MORTALITY IN RUSSIA: MAIN RISK GROUPS AND PRIORITIES OF ACTION

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Summary

The report ***Mortality in Russia: main risk groups and priorities of action*** has been prepared to an order of the International movement "Physicians of the world for longevity" and constitutes a study of long term mortality evolution in Russia from 1965 to 1995. For the first time a systematic analysis of the annual life tables by cause of death for seven large classes of the International Classification of Causes of Death is presented. Yet, an additional detailed information is also widely used in it. These are particularly materials of the Russian-French project on mortality trends in Russia by 175 causes of death. Principal statements and conclusions of the report are presented below.

1. After the World War II mortality in Russia during some period decreased quite rapidly, and life expectancy of Russians grew, approaching levels of major industrial countries. In the mid 1960s the gap between Russia and these countries became minimal for the whole history of the XX century. However, later this favourable tendency ceased, a growth of life expectancy in Russia changed for a stagnation or even for a decline, the gap between Russia and majority of industrial countries began to grow again.

2. It was managed to break this unfavourable tendency for a short time with the beginning of the anti-alcohol campaign in 1985. In 1987 life expectancy at birth reached the highest level in the history of Russia - 65 years for males and 74.6 years for females. However in 1988 the backward motion began. At the end of 80s, and especially in the early 90s, Russia experienced unprecedented increase in mortality. By 1994 life expectancy for males reduced as far as 57.5 years and for females - as far as 71.2 years. Especially sharp reduction occurred in 1993. During only one calendar year it has decreased by 3.1 for males, and by 1.6 years for females.

3. Since 1995 mortality in Russia has declined. During 1995-1996 life expectancy for males has grown up to 59.6, and for females - up to 72.7 years. The reduction of mortality is continuing in 1997, however for male it is still higher than ever since the end of 50s, and for females it is higher than ever since the mid 60s.

4. In large, the whole 30-year period between 1965-1966 and 1995-1996 was characterised by unfavourable trends in mortality and life expectancy in Russia (any marked exclusions were only years 1985-1987). During the whole period life expectancy in most of the industrial countries was growing, and the legging behind of Russia was increasing catastrophically. Recently Russia was outpaced by such countries as Mexico and China, where life expectancy was steadily growing during the last three decades. All this gives ground to speak about prolonged thirty-year **mortality crisis** in Russia.

5. Since the 1960s Russia clearly fails the modern stage of the epidemiological transition. Archaic structure of mortality by causes of death stagnated and even began to worsen. Its long-term changes not only did not give a reason to speak about a progressive reconstruction following the world experience of the second half of the XX century, but in many cases rather testified a motion in the opposite direction.

6. Changes in the distribution of **probabilities of dying** during the whole life span from different classes of causes of death were generally unfavourable. At the same time, there were some positive upheavals. In particular, it was a continuous decline of probability of dying from "available" causes of death, such as infectious diseases and, especially, respiratory diseases, accompanied by a simultaneous increase in probability of dying from diseases of the circulatory system - class of causes of death with prevalent endogenous nature and relative high mean age at death. Only in the first half of the 1990s these positive tendencies have been replaced by negative ones. Probabilities of dying from infectious diseases and respiratory diseases started to grow, and probabilities of dying from diseases of the circulatory system to decline.

The most unfavourable change occurred in the long term trend of probabilities of dying from accidents, poisoning, injuries and violent causes of death ("external causes"). It was interrupted in the mid-1980s, and that is a principal explanation of the general mortality reduction at that time. Unfortunately, later it has commenced again and even accelerated. The increase in probability to dying from designated causes made the distribution of deceased by cause of death in Russia particularly unfavourable. Its negative effects considerably outbalanced all positive or neutral upheavals, which also were altering this distribution between 1965 and 1995.

7. However, even more disappointing were changes in the second principal component of mortality structure, **mean age at death** for each of the large classes of causes of death. Progressive, positive changes consist in the increase of mean ages at death, namely in shifting deaths to the elder ages. In Russia during 30 years there were no observed serious growth of these indices for any class of causes of death. Not taking into account short-term rise in the second half the 1980s, one should speak rather about prevalent tendency to a **decline** of mean ages at death, or about mortality **rejuvenation**. It is especially important, that this tendency affected diseases of the circulatory system - cause of death of approximately one half of men and more than two third of women.

8. As a result of the described evolution of mortality **age-causes of death specific groups of excess risk** took shape. They are decisively determine the unfavourable mortality situation in Russia and at the same time indicate priorities of action capable to improve the situation. In the report such groups were derived on the basis of comparisons of life table death numbers from large classes of causes by five years age intervals in Russia with corresponding numbers for "western model" (averaged data for four industrial countries: USA, UK, France and Japan). Difference in life table death numbers between Russia and the "West" represents the excess

number of deaths. In total 240 age-causes of death specific groups are considered (combination from 15 age and 16 causal groups).

9. Overall excess number of deaths for male in ages under 70 in 1995 were 385 per 1000 deaths in all ages. At that 51.4 % of all excess deaths related to 20 from 240 age-causes of death specific groups. Main zone of excess male losses comprises losses from **ischeamic heart disease** in people aged 40 to 70 years and from **cerebrovascular disease** - in ages between 50 to 70. Only these two "risk zones" were responsible for 31.2 % of all excess losses in 1995. The next highest "risk zone" consist of the **"other external causes"** with 16.9 % of excess deaths in 1995. **External causes altogether** determined about almost by 20 % of excess deaths more, than all diseases of the circulatory system. Beyond these two major "risk zones" extremely high mortality for boys on the first year of life from **"other diseases"** is remarkable.

10. For women in ages under 70 excess mortality is much lower than for men. Its concentration in a small number of groups is even higher, than for men. For women 174 from each thousand of deaths were in 1995 excess ones, 53.6 % of them were concentrated in groups, comprising less than 4 % of the total number of groups, and one third of all excess deaths related to only four from 240 age-causal groups.

Main zones of excess female deaths are deaths at ages between 55 and 70 from **ischeamic heart disease** and **cerebrovascular disease**. In 1995 these six groups were responsible for 42.1% of excess female deaths. The relationship of the females mortality from external causes is not as close as that for males and their impact to the excess mortality is much lower, than the impact of the cardiovascular diseases. Meanwhile, number of infant deaths for girls from **"other causes"**, though lower, than for boys, but also is very high. For girls, as for boys mortality from "other causes" is a major component of excess infant mortality and also of infant mortality in general (in 1995 this cause were responsible for losses 72 % of all deaths under age 1 for boys and 70 % for girls).

11. High concentration of trouble in relatively small number of age-causes of death specific groups indicates to the necessity of unequal concentration of efforts to overcome the long-term crisis of mortality in Russia. Special, provided with resources and organising facilities national programs of emergency actions are necessary. At least, three directions are the most essential:

Struggle against mortality from ischeamic heart disease and cerebrovascular disease in middle ages.

Struggle against mortality from external causes - accidents, poisonings, injuries and violent causes of death, especially among men of the working age.

Struggle against infant mortality from "other causes" (congenital abnormalities, birth injuries etc.), and, perhaps, also from respiratory diseases.