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FINAL DRAFT

Russia

USAID Health Profile

(Selected Data)

April 24, 1992



Center for International Health Information/ISTI
USAID Health Information System
1601 N. Kent Street
Suite 1001
Arlington, Virginia 22209
(703) 524-5225

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International Development.**

**The Center for International Health Information
Roy I. Miller, Ph.D.
1601 N. Kent Street, Suite 1001
Arlington, VA 22209
(703) 524-5225
FAX (703) 243-4669**

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This is one of a series of country profiles produced by the Center for International Health Information (CIHI), a USAID resource managed by the International Science and Technology Institute (ISTI). U.S. Bureau of the Census (BUCEN) made available its extensive demographic data files. Each profile includes summary descriptions, tables and graphs about the demographic and health conditions in republics of the Commonwealth of Independent States (C.I.S.).

The series of profiles is intended to provide current and trend data in a concise format to project design teams, evaluation teams, technical consultants, and other interested individuals and organizations. As summary documents, they do not provide comprehensive descriptions of either the demographic profile or health sector of the republics. Furthermore, the incipient nature of the C.I.S. necessitates the reporting of information from the era of the former U.S.S.R. While dated in some instances, policy changes in the U.S.S.R. made in the latter part of the 1980's, including the introduction of new forms of health insurance and arrangements to encourage private health providers, may well provide the foundation for the shape of the health sector in the coming decade.

This first series of C.I.S. profiles was compiled rapidly with readily available data. Occasionally, where the background documentation of the source material was sketchy and time prevented further verification, the data was included anyway in hopes that the mere inclusion of the data would stimulate further clarification by the various users of the profiles. On behalf of USAID, CIHI is planning to update the C.I.S. profiles as rapidly as new data becomes available and in response to commentary on the data in the current profiles. Accordingly, the authors of the profiles request that any more recent or more accurate data be forwarded to CIHI at the address below or to CIHI care of the USAID, Bureau of Research & Development, Office of Health, SA-18, Room 1200, Washington, D.C. 20523-1817.

Requests for additional information regarding C.I.S. republic profiles, health and population profiles for selected developing countries, and other reports prepared by CIHI should be transmitted directly to CIHI or through USAID as described above.



CENTER FOR INTERNATIONAL HEALTH INFORMATION/ISTI
USAID Health Information System
1601 North Kent Street, Suite 1001
Arlington, Virginia 22209
(703) 524-5225

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INTRODUCTION: An Overview of the C.I.S.

Of the 15 republics that once made up the Union of Soviet Socialist Republics, 11 joined together and formed the Commonwealth of Independent States (C.I.S.). The Republic of Georgia and the Baltic States -- Latvia, Lithuania and Estonia -- chose to remain outside the commonwealth and became independent countries. While this configuration has remained constant for many months, it is possible that the current commonwealth arrangement will be a transitional step to total separation.

While situations vary greatly from republic to republic, the recent political, economic and social transitions have created several challenges which are common throughout the entire C.I.S. The republics are moving from a totalitarian government and centrally controlled economy to a more democratic system based on free market principles. As a result, prices have risen rapidly and now far exceed individual and family incomes. The purchasing power of the population has fallen and it has become increasingly difficult to purchase essential goods.

The availability of goods has also been affected by the transition. While the former USSR achieved status as a large, industrialized nation, the structure of its economic network divided labor among republics and regions, so each republic had its own sector of emphasis. However, this specialized structure rendered republics dependent on each other and made self-sufficiency nearly impossible. Now that the republics have declared independence within the C.I.S., ties among republics have been interrupted and production, distribution and trade systems have broken down. Consequently, production capabilities and supplies of numerous essential goods in each republic have been threatened.

The combination of rising prices and a breakdown in trade and production has resulted in a shortage of even the most basic commodities. Food supplies have been particularly affected and, consequently, people are reducing their consumption. This trend further jeopardizes the already fragile health status of much of the C.I.S. population, as described below.

In the former USSR, selected population groups within each republic received subsidies from the national government. Due to the economic and social stresses of the transition, the number of people dependent on this assistance has increased. However, this increased demand for assistance comes at a time when public finance is stretched to its limit and new tax and revenue raising systems are not yet established. In addition, minimum wage is currently the criteria used to determine who should receive government support. Minimum wage, however, has not kept pace with rapidly rising prices and this criteria no longer accurately reflects who is actually in need of assistance. Likewise, new mechanisms must be created to respond to new problems: the dramatic increase of unemployment and destitution in the C.I.S.

Health services are threatened by the lack of hard currency and the breakdown of intra-republic trading. Without these two elements, supplies of essential drugs, vaccines and supplies are rapidly decreasing. While vaccination coverage rates have been relatively high in many republics, depletion of vaccine stocks has been particularly extensive and the potential exists for epidemics of infectious childhood diseases. Vaccine production has been hampered by inadequate, old facilities, shortages of specimens, and insufficient, outdated

INTRODUCTION (continued)

equipment. For the same reasons, essential drugs and medical supplies are limited and may soon be depleted. The population of the C.I.S. receives little information on family planning issues. Limited availability and substandard quality of contraceptives have resulted in a high rate of abortion. The breakdown of intra-republic trade and trade with countries outside the C.I.S. has intensified the shortage of contraceptives.

While severe hunger has been averted, the nutritional well-being of the C.I.S. population may be threatened. Rising food prices, little variety in available food and perceived scarcity all contribute to poor nutrition. Improper nutrition increases susceptibility to infections and anemia is common among pregnant women.

The state of the environment has a major impact on the health of the population. In many areas of the C.I.S., environmental contamination by chemical and radioactive pollutants is believed to be harming people's health and causing a variety of chronic conditions and birth defects.

While the challenges faced by the C.I.S. republics are similar in some aspects to those of other countries where international donor organizations work, their problems cannot be compared to those of developing countries. The republics present a unique situation: They have many capabilities but lack the necessary means to implement them. Many republics have access to modern, nationally developed technologies, but their facilities are old and unacceptable for production, the distribution and trade systems are disrupted, and lack of funding often renders continued production impossible.

As political reforms and economic privatization proceed, the nation's most vulnerable groups -- primarily women, children, aging adults and people with disabilities -- need protection. The basic needs of these groups must be met in order to avoid unnecessary human suffering and further social upheaval.

RUSSIA

Capital: Moscow

President: Boris Yeltsin

Prime Minister: Boris Yeltsin

TERRITORY

Size¹: 17 million sq. km
 Percent of former USSR¹: 76%

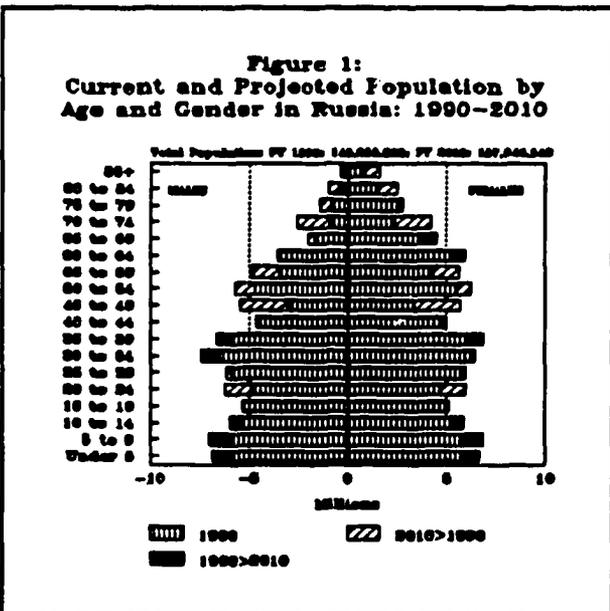
Russia is not only the largest republic to emerge from the former USSR, but it is now the largest country in the world in terms of square miles. It is approximately twice the size of the United States.¹

POPULATION

Population¹: 148 million (1990)
 Percent of former USSR¹: 51%

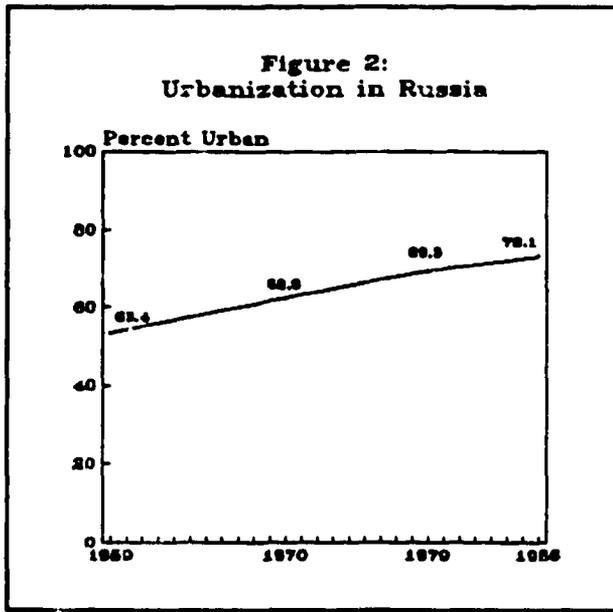
Russia's population is spread out among 16 autonomous republics and a total of 15 autonomous regions and districts. This incredible diversity has led to inter-ethnic and nationalistic conflict.¹

Of the approximately 148 million people in Russia in 1989, the total number of males was 69,039,000 and females totalled 78,361,000. There were approximately 881 males per 1,000 females.²



Level of urbanization

In less than 20 years, the trend in urbanization in Russia increased by almost 20 percent. By 1959, approximately 53.4 percent of the population lived in urban areas; that percent rose to 62.3 by 1970 and to 69.3 by 1979.³ By 1989 it had risen to 73.6, with a total of 108,425,000 people living in urban areas and 38,975,000 people in rural areas.²



Population by nationalities

Ethnic Russians make up 81.5 percent of Russia's population, but more than 100 minorities live within its borders.¹

In 1989, nearly 120 million ethnic Russians lived in the republic. Ukrainians and Byelarusians represent the largest non-Russian nationalities with populations of approximately 4.4 million and 1.2 million, respectively. The distribution of nationalities is shown in the following table.²

RUSSIA: USAID Health Profile (continued)

Nationalities in Russia ² (1989)	
Total	147,022,000
Republic Nationalities	
Russian	119,866,000
Ukrainian	4,363,000
Byelorussian	1,206,000
Uzbek	127,000
Kazakh	636,000
Georgian	131,000
Azerbaijani	336,000
Lithuanian	70,000
Moldavian	173,000
Latvian	7,000
Kyrgyz	42,000
Tajik	38,000
Armenian	532,000
Turkmen	40,000
Estonian	46,000
Other ^a	4,672,000
Autonomous Republic Nationalities	
Tatars	5,522,000
Chuvash	1,774,000
Dagestanis	1,749,000
Bashkirs	1,345,000
Chechen-Ingush	1,114,000
Mordvinians	1,073,000
Udmurts	715,000
Maris	644,000
Kabardino-Balkir	564,000
Buryats	417,000
Ossetians	402,000
Yakuts	380,000
Komis	336,000
Tuvinians	206,000
Kalmyts	166,000
Karelians	125,000
Abkhazy	7,000
Karakalpak	6,000

^a includes Jews, Germans, Poles, and others

ECONOMIC OVERVIEW

The economic situation in Russia is a critical factor in the republic's efforts to build a sustainable democratic system, meet the basic needs of its citizens and prevent further upheaval in an already volatile social situation.⁴

The government applied a shock therapy approach when introducing market reforms to Russia. In order to reduce possible hyperinflation, price

liberalization was implemented within what was still a very monopolistic economic system. Critical production factors such as land, major industrial units, services and agriculture are still in the process of being incorporated into the market system.⁴

Regional and intra-C.I.S. trade is collapsing, creating market disintegration and increased use of direct exchanges and bartering. Elements of the market's infrastructure, such as trade systems, business communication and transportation, are either fragile or have yet to be fully developed. Many consumer goods previously imported from Eastern European nations are now in short supply.⁴

Concurrently, the national output fell by 15 percent in 1990-91. The extent and impact of this total decrease of production is comparable to that of the Great Depression in the United States and other industrialized countries.⁴

These economic conditions have resulted in massive increases in food prices. Some basic foods remain in short supply or are not available at all. Many Russian citizens have been forced to spend their savings on food and use food reserves. The most vulnerable social groups in this situation are children, the elderly, people with disabilities and individuals on a fixed income from national or local budget resources. The government is working to develop a comprehensive system of social protection and safety nets.⁴

Despite the current economic challenges, Russia is rich in raw materials and has the potential to develop an independent economy. The republic produced 61 percent of the former USSR's G.N.P.¹

Oil, Gas and Coal Production in Russia ⁵			
	Oil *	Gas **	Coal***
1970	284.8	77.7	344.8
1975	411.3	107.4	381.1
1980	546.7	236.7	391.4
1985	524.3	430.6	395.2
1986	561.2	468.8	407.9
1987	569.5	507.3	414.7
1988	568.8	549.7	425.5
1989	552.2	573.9	409.9

* Crude oil production, including gas condensate, in million metric tons
 ** Natural gas production, in billion cubic meters
 *** Coal production, in million metric tons

RUSSIA: USAID Health Profile (continued)

INCOME OVERVIEW

In 1989, sixty-seven percent of the Russian population had a per capita monthly income between 75-200 rubles; 28 percent had a per capita monthly income over 200 rubles.⁶

EMPLOYMENT OVERVIEW

Approximately 66 million people in Russia were employed in 1989. About one third of individuals employed in Russia worked in industry. Employment in the republic is distributed as follows:⁷

Employment by Branch (1989)	
Total	65,837,000
Industry	2,003,000
Agriculture*	5,766,000
Transportation	5,266,000
Communications	885,000
Construction	7,539,000
Public services**	8,619,000
Social security***	3,787,000
Education	5,491,000
Culture & art	1,068,000
Science & services	2,927,000
Credit & state insurance	385,000
Administration	1,161,000
Other	940,000

- * includes employment on state farms and in forestry
- ** includes employment in trade, public dining, material technical supply and procurement, housing and municipal economy
- *** includes employment in health, physical, cultural and social security

HEALTH OVERVIEW

Total population ¹	148 million	1990
Crude birth rate ²	13.4 per 1,000 population	1990
Crude death rate ²	11.2 per 1,000 population	1990
Infant mortality rate ³	19.4 per 1,000 live births	1987
Maternal mortality ratio ¹⁰	49.0 per 100,000 live births	1989

The health system of the former USSR was chronically under-funded, and the individual republics of the C.I.S. have inherited this legacy and its problems. Areas demanding the most immediate attention in the C.I.S. are the often poor quality of care given by physicians and nurses, the shortage of medical supplies, pharmaceuticals and equipment, inadequate facilities, and, finally, the population's lack of knowledge about basic health practices.⁴

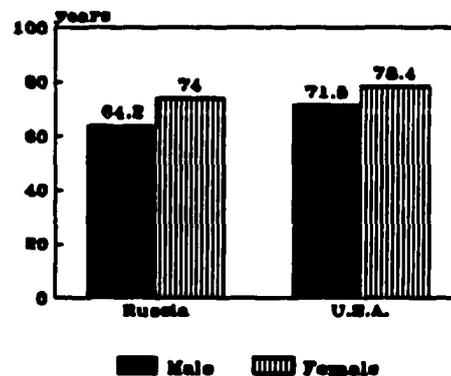
The health care needs of the newly formed C.I.S. were examined by the U.S. Agency for International Development and the U.S. Department of State and reported in a January 1992 background paper. This examination reported an urgent need for medications to treat upper respiratory illnesses and cardiovascular diseases and for vaccination programs for children and the elderly, particularly in Moscow, St. Petersburg and the industrialized areas of the Urals. The report also cited a critical need for cancer treatment programs in areas affected by the Chernobyl nuclear power plant accident.¹⁰

The number of physicians and hospital beds in Russia in 1987 was 4.6 and 13.6, respectively, per 1,000 population.⁹

Life expectancy

Life expectancy at birth in Russia in 1989 was 64.2 years for males and 74.5 years for females, compared to 71.5 and 78.4 years for males and females, respectively, in the United States in 1987.¹³

**Figure 3:
1989 Life Expectancy at Birth:
Russia Compared to U.S.A.***



*U.S.A. Data is for 1987

RUSSIA: USAID Health Profile (continued)

Mortality rates

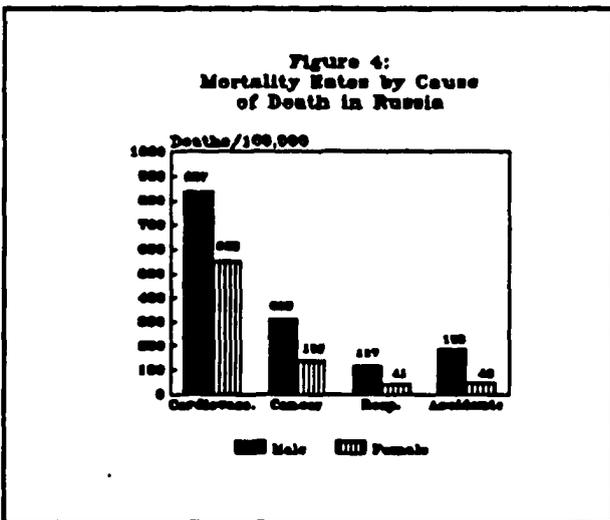
Since the early 1970s, trends in mortality rates for republics in the former USSR have generally followed the trends for the average level of the Union. Mortality rates gradually increased for more than a decade before steady improvement began in 1985-86, but by the late 1980s, Russia was the only republic with a mortality rate lower than in 1970. The Ukraine, Georgia and Armenia are approximately at the 1970 mortality level.¹⁴

Compared to all other former USSR republics, Russia has the largest gap (more than 10 years) between male and female life expectancies at birth. The republic's male life expectancy is lower and the female life expectancy is higher than the overall level of the former USSR. Russia's male mortality in 1986 was higher than the overall level of the former USSR for all age-groups older than 20 years, with especially high rates for the 50-54 and 55-59 age-groups.¹⁴

Cardiovascular disease and alcohol-related diseases are epidemic in adults in Russia. Since the early 1960s, deaths from cardiovascular disease have increased by 60 percent. Alcohol is linked with 20 percent of all premature deaths. More than one sixth of the average household budget is spent on hard liquor; in the Slavic Republics, one fourth of the families spend more than one third of the family income on hard liquor.⁴

Causes of death

The main causes of death in Russia are cardiovascular conditions, cancer, accidents and respiratory conditions. In 1988, a total of 1,589.5 males and 854.6 females (both per 100,000 population) died from these and other causes.¹⁰

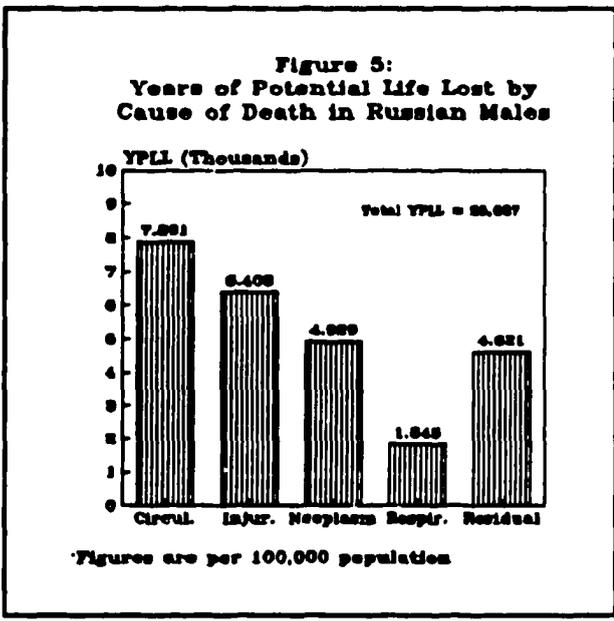


Years of potential life lost by cause of death (YPLL)

Each year in the Russian republic, males lose a total of 25,687 years of potential life per 100,000 male population due to various causes of death. Circulatory conditions are the most common, causing 7,891 YPLL. Death caused by injuries total 6,403 YPLL, neoplasms total 4,929 YPLL, respiratory conditions total 1,843 YPLL and other causes (residual) total 4,621 YPLL.¹⁵

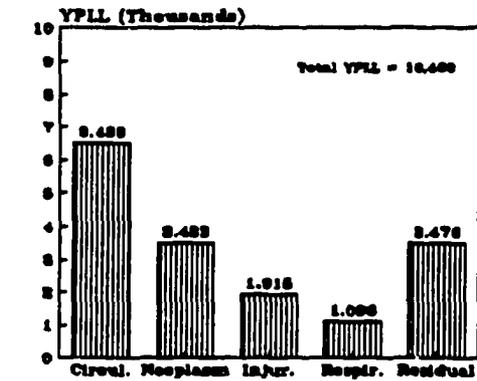
Russian females annually lose a total of 16,469 years of potential life per 100,000 female population due to various causes of death. Circulatory conditions are also the leading cause among females, causing 6,499 YPLL. Death caused by neoplasms total 3,483 YPLL, injuries total 1,915 YPLL, respiratory conditions total 1,096 YPLL and other causes (residual) total 3,476 YPLL.¹⁵

In Russia and other European republics in the C.I.S., circulatory system diseases are the leading causes of YPLL, more so than in other republics in the commonwealth. With the exception of Armenia, YPLL due to injuries are also more common in European republics than other C.I.S. republics.¹⁵



RUSSIA: USAID Health Profile (continued)

Figure 6:
Years of Potential Life Lost by Cause of Death in Russian Females



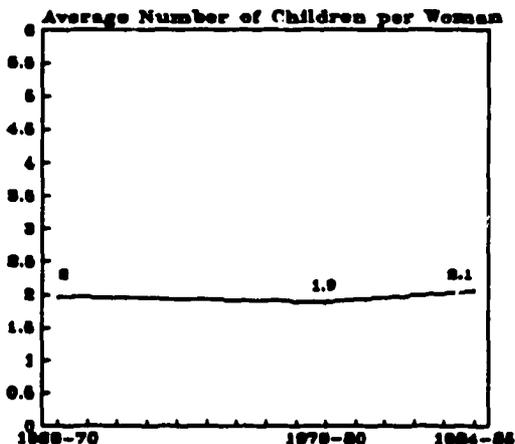
*Figures are per 100,000 population

Fertility rate

The fertility rate in Russia has increased since 1969. The average number of children per woman in 1969-70 was 2.0. While that number fell to 1.9 in 1979-80, it rose again to 2.1 by 1984-85.³

To account for under-registration of births, the U.S. Bureau of the Census (BUCEN) adjusted the total fertility rate (TFR) for 1990 to be 2.0 children per woman. The projected TFR for 2010 is 1.8 children.¹⁸

Figure 7:
Total Fertility Rate in Russia



Maternal mortality

Maternal mortality declined between 1985 and 1989, and an estimated 54 deaths per 100,000 live births were reported in Russia in 1990. This ratio is still seven times greater than the ratio in the United States.⁴

The maternal mortality ratio in 1989 was 49.0 deaths per 100,000 live births.¹⁰ Toxemia is the most common cause of maternal mortality, followed by infections, hemorrhage and hepatitis.⁴

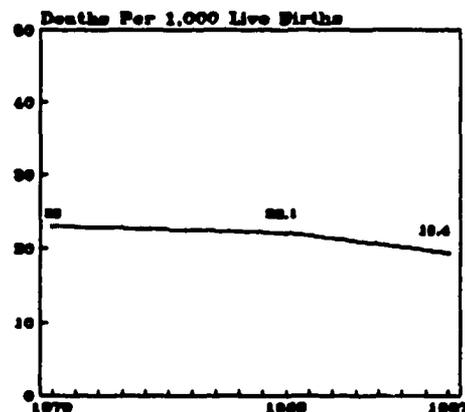
Insufficient equipment, supplies and drugs also contribute to maternal mortality, as does the overall lack of family planning information and services.⁴

The Chernobyl Nuclear Power Station accident has had a negative impact on the health of women living in areas affected by the resulting radiation. An increase in frequency of pregnancy complications has been reported, such as pyelonephritis of pregnancy, postpartum infections, inflammatory diseases of mothers and newborns, and an increased incidence of congenital malformations and spontaneous abortions.⁴

Infant mortality

The infant mortality rate in Russia decreased from 23 deaths per 1,000 live births in 1970 to 22.1 deaths in 1980 to 19.4 deaths in 1987.⁹

Figure 8:
Infant Mortality Rate in Russia

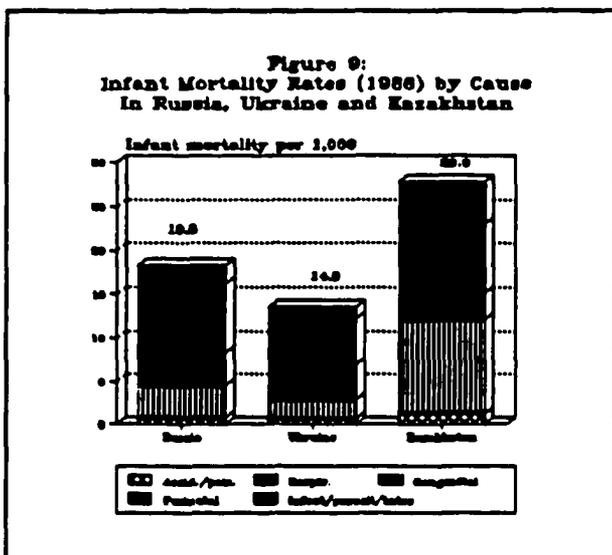


The official infant mortality rate was 17.4 deaths per 1,000 live births in 1990 and 17.6 in 1991. However, a UNICEF/WHO mission report from early 1992 notes that if these figures were adjusted for differences in classification of infant death

RUSSIA: USAID Health Profile (continued)

between Russia and other western countries, the actual infant mortality rate is estimated to be 25 deaths per 1,000 live births. This is almost double the rate in the United States.⁴

Of the 19.3 infant deaths per 1,000 live births reported in Russia in 1986, 2.08 were caused by infectious, parasitic and intestinal diseases, down from 2.99 in 1984; 3.77 were caused by respiratory diseases, down from 5.52 in 1984; 3.72 were caused by congenital anomalies; 7.96 were caused by perinatal conditions; and 0.8 were caused by accidents and poisonings.¹⁴



Socio-cultural factors greatly affect infant mortality. For example, infant mortality is closely associated with the mother's working conditions, the nature of her work, the birth-rate level and the everyday life and cultural traditions of the people who are responsible for child care in a family.¹⁴

Since 1975, infant mortality rates for urban and rural populations have declined. The gap between urban and rural infant mortality began to close after 1975, as shown in the table below.¹⁴

Infant Mortality Rates (per one thousand live births) ¹⁴ According to Place of Residence (1975-86) Russia vs. Former USSR			
	1975	1980	1986
	Russia (USSR)	Russia (USSR)	Russia (USSR)
Urban	22.5 (25.8)	21.2 (23.5)	18.8 (21.1)
Rural	26.2 (37.0)	24.0 (32.5)	20.4 (31.4)

The official Soviet statistics for infant mortality rates understate the actual levels by approximately 50 percent, according to BUCEN estimates. The definition of infant mortality in the former USSR varied significantly from the standard international definition from WHO. BUCEN estimates infant mortality to be 22.1 deaths per 1,000 live births for 1990 and 10.8 deaths for 2010.¹⁸

Birth rates

Crude birth rates in Russia have decreased since 1989, falling from 14.6 in 1989 to 13.4 in 1990 to 12.0 in 1991. According to a UNICEF/WHO mission report in early 1992, the Ministry of Health reported in June 1991 that there was a negative population growth rate for the first time in the republic.⁴

Delivery and breastfeeding

The majority of births occur in a hospital, 50 percent of which have modern equipment. An estimated 70 to 80 percent of mothers leave the hospital breastfeeding while the remaining percent of mothers do not breastfeed due to complications at delivery, hypocalactia, premature birth or mastitis; a delay in breastfeeding is often due to hemorrhage or caesarian. The rate of breastfeeding is reported at about 60 percent three to four months after birth, but this percent decreases substantially thereafter.⁴

Pregnant women are routinely checked for anemia and 20 to 25 percent are found to be anemic; in Siberia and the northern parts of Russia, that percent is 30 to 35.⁴

Babies are examined at the polyclinic once a month until 12 months old; each time the baby's weight and measurements (height and head circumference) are recorded and plotted on a growth chart. While underweight and dystrophy are uncommon, obesity is increasing due to the typically high carbohydrate diet fed to babies.⁴

Contraception

The use of modern contraceptive methods in Russia is low, predominantly due to a shortage of modern contraceptives, insufficient medical and paramedical education, and lack of family planning information and services. While the overall Contraceptive Prevalence Rate (CPR) for Russia was 18.1 in 1990, the rate in areas in Russia affected by Chernobyl was 10 to 12 percent.⁴

The IUD is the most popular contraceptive method in Russia and is used by 17.2 percent of the women.

RUSSIA: USAID Health Profile (continued)

IUDs are produced in Russia, but the quality is often poor and many facilities cannot function at capacity because of supply shortages.⁴

While oral contraceptives are actively promoted in Russia, their acceptance remains low -- about 1.57 percent of women in the reproductive age use this method. Side-effects of the pill are a concern, possibly due to the fact that older, high dosage formulations are still prescribed.⁴

Russia lacks an adequate supply of contraceptives. Supplies in rural areas are scarce to nonexistent. Oral contraceptives are not produced in Russia; several types are available in Moscow pharmacies but some of these types, such as Lindial, are prohibited in the West. National production of condoms is about 370 million per year, but the estimated need is much greater. While the price of condoms are reportedly affordable, local production is hampered by the lack of latex.⁴

Until two years ago, sterilization had been restricted since 1933. Now, voluntary sterilization is permitted under specific conditions, but it is not a popular contraceptive method. Male sterilization is simply not practiced; the absence of specialists and equipment greatly limit female sterilization.⁴

In addition to supplies, there is a great need for information, education and communication about family planning.⁴

Abortion

A reported four million abortions were performed in Russia in 1991 and another 520,000 are estimated to be done "illegally," which is defined as outside of the State health care system. However, it is likely that for first pregnancies, about 70 to 90 percent of abortions are not recorded by official statistics. The current ratio of about 120 abortions to 100 live births reveals that Russia's low fertility rate is in large part due to the high number of induced abortions; in fact, abortion continues to be the primary method of fertility regulation.⁴

The high abortion rate, coupled with the very low contraceptive prevalence rate, creates a need for the reduction of abortion and the introduction of modern contraceptive methods.⁴

Abortion also contributes to maternal mortality. Future pregnancy problems, such as secondary sterility, are common and complications from abortions resulted in the deaths of 328 women in 1990. Induced abortions are thought to contribute to the high ratio of female mortality caused by neoplasms of the reproductive system.⁴

Spontaneous abortions have been linked to areas affected by the ionizing radiation after the Chernobyl Nuclear Power Station accident. Abortions in these areas were of greater risk than other parts of Russia due to the women's generally weaker immune system and higher rates of anemia.⁴

HIV/AIDS

The HIV/AIDS situation in Russia is monitored by the Russian Federation Ministry of Health and the State Committee for Sanitary and Epidemiological Surveillance, which is directly under the President of Russia.⁴

Between 1987 and October 1991, the number of identified HIV seropositive persons was 1,263, of which 668 are citizens of the former USSR and 288 are children less than 14 years of age. Of the 70 AIDS cases reported, 42 were children. Forty-seven AIDS patients have died, of which 29 were children.⁴

HIV infection by sex distribution shows that 40 percent of HIV seropositives are women and 60 percent are men, resulting in a 1:1.4 ratio.⁴

Russia has established a special infrastructure for AIDS prevention and control which includes a central Russian AIDS center, six large regional centers and 89 peripheral centers. Approximately 1015 diagnostic laboratories (of which 344 offer blood transfusion services) perform massive screening of the Russian population for HIV infection. Currently, all pregnant women and all hospitalized patients are to be tested for HIV.⁴

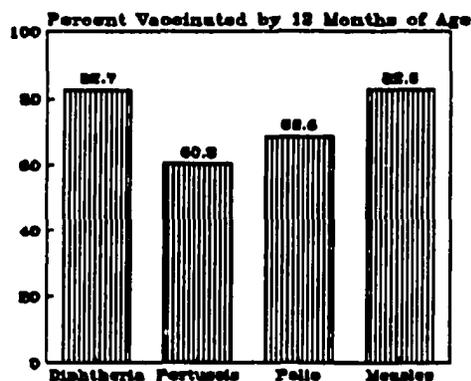
While the current incidence of HIV infection and AIDS is minimal, there is a lack of promotion of health information and education among the general population and individuals practicing high risk behavior.⁴

Vaccination coverage

By 1989, vaccination coverage in Russian infants who had reached 12 months of age were at the following levels: 82.7 percent were vaccinated against diphtheria, 68.6 percent against polio and 60.3 percent against pertussis. Vaccination coverage against measles in children by 24 months of age was 82.6 percent.¹⁶

RUSSIA: USAID Health Profile (continued)

**Figure 10:
1989 Vaccination Coverage
in Russian Infants**



*Children up to 2 yr for measles vaccine

However, a UNICEF/WHO mission reported in early 1992 that a decline in the incidence of vaccine preventable diseases in the 1970s suffered a major setback beginning in the early 1980s when the incidence rates began rising, particularly for diphtheria and pertussis.⁴

The breakdown of intra-republic trade and trade with countries outside the C.I.S. has contributed to the diminishing supply of vaccines. Inadequate cold chain management has also affected the quantity and quality of vaccines in Russia. The republic's ability to produce vaccines has also been disrupted.⁴

These conditions have led to a decrease in immunization of eligible children and may result in extensive outbreaks of EPI diseases. While the incidence of measles and poliomyelitis remains low, these and BCG vaccines are currently in short supply. It is estimated that about 40 percent of eligible children in Russia were not immunized with BCG vaccine in 1991. As a result, vaccine is used mainly for infants and booster doses are suspended.⁴

The incidence of diphtheria has increased since the early 80s and in 1991 this rate reached an epidemic level with nearly 1,900 cases reported, or a rate of 1.3 cases per 100,000 population. A UNICEF/WHO mission reported in early 1992 that this increase and the continuing epidemic are linked to three main factors⁴:

- the low level of immunization coverage with DPT and DT vaccines among children and adolescents

- the lack of immunity to diphtheria among adults
- the adverse attitude of the health staff and general public towards immunization

The incidence of pertussis has increased over the last four years and due to the under utilization of DPT vaccine in Russia, an epidemic may emerge in 1993 or 1994.⁴

Shortages of specimens such as pathogen free eggs and green monkeys, insufficient or outdated equipment and old, deteriorating facilities have created barriers in Russia's efforts to manufacture measles, polio and BCG vaccine, according to a UNICEF/WHO mission report in early 1992.⁴

Expanded Program on Immunization (EPI) materials and training methods are not being used in Russian medical and paramedical schools or post graduate and inservice training programs. The EPI component may be strengthened as the level of medical and paramedical training becomes more developed during the current period of transition in the republic.⁴

Drug and medical supplies

The pharmaceutical industry, including technical conditions, raw materials and ready-made products, is in poor condition, according to a UNICEF/WHO mission report in early 1992. In 1991, only 60 percent of needs were covered -- 35 percent through national production and 25 percent through imports. Pharmaceutical plants have not been built in Russia for the past 20 years.⁴

Drug and medical supplies have been affected by the breakdown of ties between many industries producing supplies integral to drug production. The lack of hard currency has hindered imports, particularly from eastern Europe and the Baltic States. In addition, many essential drugs and medical supplies are not manufactured in Russia; some are not made anywhere in the former USSR. Essential diagnosis and treatment equipment for the day to day activities of a specialized service is also needed.⁴

Food and nutrition

Food is an important determinant of health, and the rising food prices, little variety in available food and perceived scarcity all contribute to poor nutrition of the Russian people. Many people are living below the poverty line and it is widely believed that the people do not have enough food and that as a result, their health is suffering.⁴

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The following groups in Moscow have been identified as those in greatest need of food assistance⁴:

- single pensioners living alone on a pension between 342 and 40 rubles per month
- single, low income parent with children
- families, low income with more than three children
- various social institutions, including orphanages, hospitals and home schools

Food supplies most affected by the current economic situation are, in order, sugar, milk, milk products, meat and meat products. Vegetables are scarce and fruits have never been a major part of the population's regular diet. The Russian people are increasingly concerned about food pollutants, especially radioactive contamination and excessive pesticide residues.⁴

Anemia in pregnancy and general susceptibility to infections are common and likely the result of low consumption of fruits and vegetables. Iodine deficiency disease is prevalent in large areas of Russia and several of the C.I.S. republics. Constraints of salt iodization are related to the use of older, less stable processes and the use of old, outdated equipment.⁴

Few, if any, professionals are trained in community nutrition and misconceptions about nutrition among medical personnel abound.⁴

Environmental factors in health

Government authorities admit that Russia's environmental health is in dire straits and in need of immediate attention, according to UNICEF/-WHO mission reports made in early 1992. However, finding the resources to invest in recovery remains a challenge during the difficult period of economic and political transition and at a time when other pressing national problems take precedence.⁴

The mission confirmed that the rapid decline in environmental health parallels a decline in the indices measuring the health of a population.⁴

Air, water and soil pollution come in many forms. A wide range of physical, chemical and bacteriological substances are either inhaled directly or ingested through food or water.⁴

Nuclear radiation is also a major environmental concern. While the consequences of the Chernobyl nuclear power plant accident are serious, Russia has

for years been subjected to what the UNICEF/-WHO mission reported as over 100 non-military nuclear explosions and accidents, in addition to an unknown number of military ones. Some of these explosions were done on the surface. Three regions in the Ural mountains are reported to have received over one billion curies of radioactivity, amounting to the radiation of about 20 Chernobyls. Approximately 40 million people still live in high-risk areas throughout Russia where sources of radiation exposure include nuclear waste dumps, improperly disposed military hardware and areas previously irradiated by explosions or spills.⁴

The impact of environmental pollutants on children has been reported as extensive. In towns and cities throughout the former USSR where the level of pollution is high, increased rates of blood diseases, bronchial asthma, pneumonia, congenital abnormalities, malignant tumors, digestive tract infections and kidney diseases have been confirmed.⁴

While the environmental situation in Russia is certainly discouraging, it is important to note that millions of Russian citizens are protected by normal environmental controls, including water and sewage treatment plants and air-pollution control devices.⁴

A U.S. Center for Soviet-American Relations article in the fall of 1991 addressed the emergence of environmental reform in the former USSR. It stated that unlike environmental movements in the United States and Europe which were formed primarily in the context of ecological protection and conservation, environmental concern in the former USSR stemmed from concerns about economic development and the continued availability of natural resources. Because the former USSR command-economy placed economic output above most other domestic considerations, USSR policy paid little more than lip-service to ecological preservation. Factories churning out clouds of smoke was a sign of productivity, and resources were ruthlessly exploited with little concern to the environmental and health ramifications.¹⁷

Nonetheless, official policy (including Articles 18 and 42 in the 1977 Soviet Constitution) provided formal legal protection for the environment and public health, thus giving citizens a legitimate channel through which to voice their concerns and challenge the government.¹⁷

According to the article, the Chernobyl nuclear accident increased the wave of political awareness and began a pattern that linked environmental activism with political reform. Since 1987, numerous environmental organizations have

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received formal recognition, forming along individual republic lines and specific issues such as Chernobyl.¹⁷

In Russia, an umbrella organization in St. Petersburg, "Epitsentr," includes several smaller ecology groups which focus on controlling pollution in the city's water supplies, stopping the construction of a controversial dam in the Gulf of Finland, and preserving St. Petersburg's historic buildings and cultural monuments.¹⁷

Students at Moscow State University have formed a number of environmental organizations, including the Socio-Ecological Union in 1988, which has become one of the nation's most influential umbrella organizations committed to environmental protection.¹⁷

U.S. Food and Humanitarian Assistance Bureau (FHA) Assessment¹²

In its assessment of Russia's need for humanitarian and technical assistance conducted from January 16-February 6, 1992, a multidisciplinary team from the U.S. Food and Humanitarian Assistance Bureau (FHA) concluded that the region's evolving public health problems are related to three factors:

- the gradual erosion of hard currency income
- the sudden separation of Russia from traditional sources of supplies in the other republics of the former Soviet Union
- inflation associated with the removal of restrictions on retail prices of basic commodities

Specifically, the assessment team reported that vaccine production plants and water-purification systems have not been adequately maintained. There have been acute shortages of basic hospital supplies (e.g., disposable syringes and needles, intravenous catheters, blood transfusion sets, rubber gloves, glass ampoules, bandages and suture material) and essential drugs (e.g., cephalosporins, quinolones, insulin, analgesics, anaesthetic agents, disinfectant agents, bronchodilators and oral contraceptives). Finally, since late 1991, prices have increased threefold for basic foodstuffs (e.g., bread, eggs, meat and milk).

Approximately 75 percent of all deaths are caused by cardiovascular diseases, cancer and trauma. Three percent of deaths are caused by infectious diseases.

The treatment of infectious diseases increased during 1991, reversing previous trends, the FHA

team reported. Measles vaccine has not been produced in Russia since August 1991 and vaccine reserves were depleted in December.

During 1991, national incidence rates for bacterial dysentery and certain other enterically transmitted diseases increased substantially. In the Tom River Basin in Siberia, problems with maintenance of water-purification systems and organic pollution of drinking water were associated with incidence rates of gastroenteritis, hepatitis A and bacterial dysentery that were up to 82 percent, 47 percent and 22 percent higher, respectively, than the national incidence rates.

The incidence rate of non-infectious diseases is affected by severe shortages of essential medical supplies and drugs. These shortages have restricted the capacity of hospitals and clinics to care for newborn infants and to manage patients with chronic diseases and acute surgical and traumatic problems. However, the public health impact of these shortages has not yet been quantified.

Protein-energy malnutrition has not been reported in Russia, however, clinic physicians reported an increase in the number of children and women with anemia and micronutrient deficiencies. Price and income data indicate that persons at risk for decreases in dietary intake include the elderly, the unemployed, single-parent families, the homeless and the displaced. Some regional governments are attempting to target assistance toward groups at risk for malnutrition by providing subsidized meals and free food coupons, as well as free milk daily to preschool-aged children.

Given the situations described above, the FHA team indicated three priorities for public health assistance to Russia. First, efforts should focus on the prevention of vaccine-preventable childhood diseases, including measles, pertussis, diphtheria, and polio-myelitis. The assessment indicated that approximately 3 million children aged 1-3 years may be at risk for measles and serious sequelae. In addition to providing measles vaccine, efforts are needed to increase the production of other childhood vaccines. Second, support should be provided to water-purification plants, particularly in regions where organic pollution of public water supplies is severe. Third, medical supplies should include essential and life-saving drugs and other basic supplies.

The FHA team also recommended that assistance be directed to support existing targeted food programs and develop an emergency public health surveillance system.

RUSSIA: USAID Health Profile (continued)

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Data Notes Indicator Definitions

DEMOGRAPHIC INDICATORS

TOTAL POPULATION: Mid-year estimate of the total number of individuals in a country.

YEARS OF POTENTIAL LIFE LOST: The weighted difference between the number of years of life expectancy in absence of all preventable mortality and the number of years lost due to preventable mortality. Since deaths of children result in a greater loss of life span than deaths of adults, the differences in loss of potential life are taken into account by using a type of measure which heavily weights the importance of child death.

LIFE EXPECTANCY AT BIRTH: An estimate of the average number of years a newborn can expect to live. Life expectancy is computed from age-specific death rates for a given year. It should be noted that low life expectancies in developing countries are, in large part, due to high infant mortality.

MORTALITY RATE: Basic cause-specific death rates are usually expressed in deaths per 100,000 because for most causes of deaths the rates of occurrence are so low.

CHILDREN UNDER 1: Mid-year estimate of the total number of children under age one.

INFANT MORTALITY RATE (IMR): The estimated number of deaths in infants (children under age one) in a given year per 1,000 live births in that same year. An IMR may be calculated by direct methods (counting births and deaths) or by indirect methods (applying well-established demographic models).

MATERNAL MORTALITY RATIO: The estimated number of maternal deaths per 100,000 live births where a maternal death is one which occurs when a woman is pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management. Although sometimes referred to as a rate, this measure is a ratio because the unit of the numerator (maternal deaths) is different than that of the denominator (live births). Extremely difficult to measure, maternal mortality can be derived from vital registration systems (usually underestimated), community studies and surveys (requires very large sample sizes) or hospital registration (usually overestimated).

TOTAL FERTILITY RATE: An estimate of the average number of children a woman would bear during her lifetime given current age-specific fertility rates.

VACCINATION COVERAGE RATES

VACCINATION COVERAGE IN CHILDREN: An estimate of the proportion of living children between the ages of 12 and 23 months who have been vaccinated before their first birthday -- three times in the cases of polio and DPT and once for both measles and BCG. Vaccination coverage rates are calculated in two ways. Administrative estimates are based on reports of the number of vaccines administered divided by an estimate of the pool of children eligible for vaccination. Survey estimates are based on sample surveys of children in the target age group and may or may not include children without vaccination cards whose mothers recall that their children had been vaccinated.

Commonwealth of Independent States



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