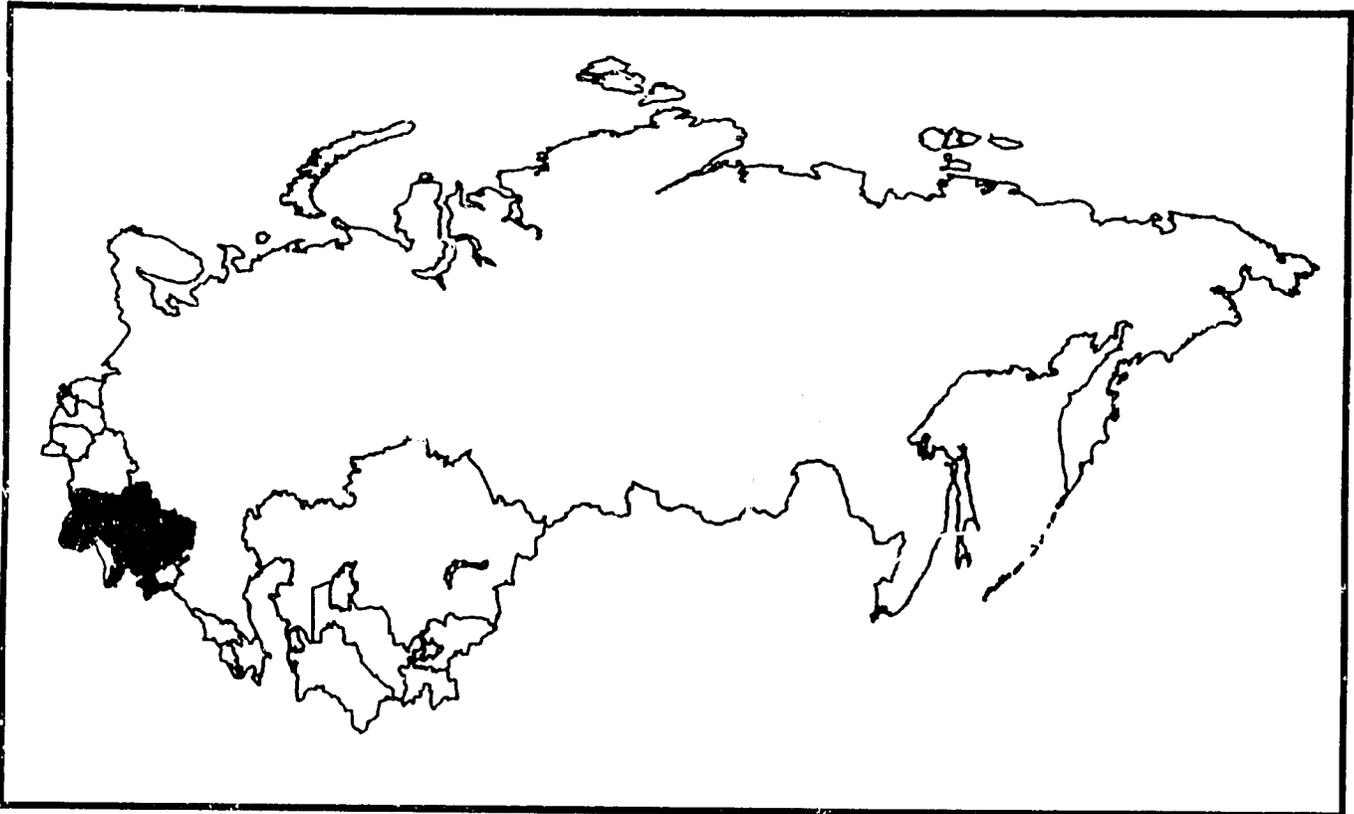

Ukraine

USAID Health Profile

(Selected Data)

April 24, 1992



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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.



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**Ukraine
USAID Health Profile**

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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 equipment. For the same reason, 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.

INTRODUCTION (continued)

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.

UKRAINE

Capital: Kiev

President: Leonid M. Kravchuk Prime Minister: Vitold P. Fokin

TERRITORY

Size¹: 603,700 sq. km.
 Approximately the size of France, or slightly smaller than Texas
 Percent of former USSR¹: 2.7%

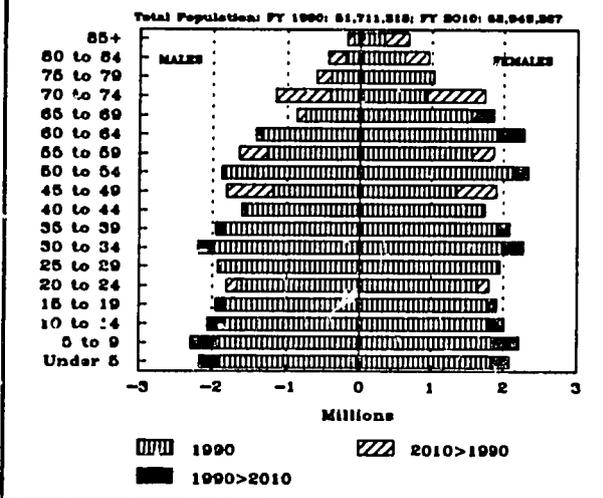
Ukraine is bordered by Romania, Moldova, Hungary, Czechoslovakia, Poland, Byelarus and Russia.

POPULATION

Population¹: 51.8 million (1990)
 Percent of former USSR¹: 18%

Of the approximately 51.8 million people in Ukraine in 1989, the total number of males was 23,908,000 and females totalled 27,799,000. There were approximately 860 males per 1,000 females.²

Figure 1:
 Current and Projected Population by Age and Gender in Ukraine: 1990-2010

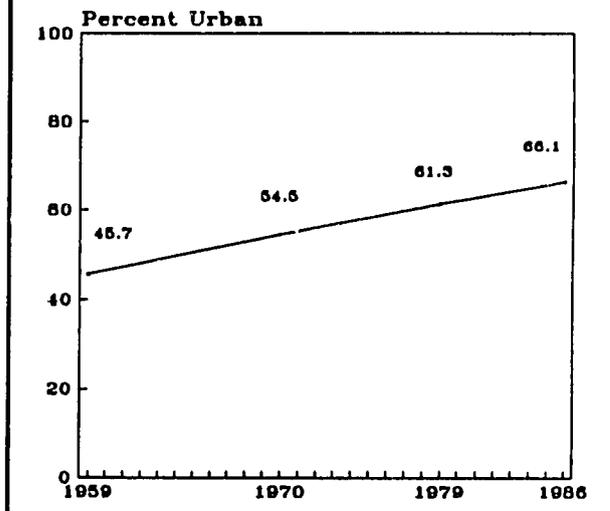


Level of urbanization in Ukraine

Urbanization in Ukraine increased approximately 21 percent in less than 30 years. In 1959, about 45.7 percent of Ukraine's population was urban; that

percent rose to 54.5 by 1970 and to 61.3 by 1979.³ By 1989, this percent was 67.0 percent, with a total of 34,588,000 people living in urban areas and 17,119,000 people in rural areas.²

Figure 2:
 Urbanization in Ukraine



Language fluency

Ukrainian was made the national language in 1990; Russian is also an official language.⁴ About 78 percent of the population of Ukraine speaks Russian fluently while an almost equal amount speaks Ukrainian. About 34 percent of Russians who live in Ukraine are fluent in Ukrainian. New language laws guarantee the right of ethnic non-Ukrainians to use their language for public and judicial business.¹

Population by nationalities

Ethnic Ukrainians make up 74 percent of the republic's population; 21 percent are Russian and 0.6 are Byelarusian. From 1979 to 1989, the population of Ukrainians decreased by about one percent while the population of Russians increased by about one percent. However, the difference in growth rates was more significant between 1959 and 1979 when the number of Ukrainians decreased by 3.1 percent while the overall number of Russians increased by 4.3 percent.¹

UKRAINE: USAID Health Profile (continued)

Nationalities in Ukraine ² (1989)	
Total	51,452,000
<u>Republic Nationalities</u>	
Ukrainian	37,419,000
Russian	11,356,000
Byelarusian	440,000
Uzbek	20,000
Kazakh	11,000
Georgian	24,000
Azerbaijani	37,000
Lithuanian	11,000
Moldovan	325,000
Latvian	7,000
Kyrgyz	2,000
Tajik	4,000
Armenian	54,000
Turkmen	3,000
Estonian	4,000
Other*	4,672,000
<u>Autonomous Republic Nationalities</u>	
Tartars	87,000
Dagestanis	5,000

* includes Jews, Germans, Poles and others

ECONOMIC OVERVIEW

The second richest republic, Ukraine has some of the richest land of the former USSR and often has been referred to as the nation's "bread basket." Ukraine's diversified economy includes substantial agricultural production; in 1989, the republic produced 25 percent of all grain and meat, and 50 percent of sugar beets of the former USSR.^{1,4}

Its industrial output was equally strong, contributing 33 percent of steel and 80 percent of locomotives of the former USSR, as well as many sophisticated technologies. Ukraine's broad industrial base includes much of the former USSR's space industry and large mineral deposits. Energy sources, such as coal, mineral oil and natural gas are among the few materials to bring in foreign currency. The republic produced one-fifth of the former USSR's chemicals and machinery and large amounts of consumer goods.^{1,4}

Ukraine's economic potential is great, but economic ties and intra-republic trading have broken down since the dissolution of the former USSR. Like other republics in the C.I.S., Ukraine was dependent on intra-republic trade and consequently, supplies of many essential goods are diminishing or have been depleted. Lack of a viable method of exchange has also hindered trade, although Ukraine has made the replacement of rubles with a national currency a priority. In the interim, coupons were issued on January 10, 1992 and are used for the majority of purchases.⁴

Since declaring independence on August 24, 1991, Ukraine has signed bilateral trade agreements with all other republics and is seeking trade with neighboring Poland and Hungary.¹

Prices for food and supplies have soared in state controlled shops, as well as the open market. Food items integral to the Ukrainian diet, such as meat, bread, pasta, butter, oil, cabbage and milk are scarce on the shelves of state shops. Consequently, the people of Ukraine have resorted to buying on the open market at much higher prices.⁴

Household purchasing power is rapidly decreasing as family incomes are unable to keep pace with price increases. While prices continue to rise, salary increases have been sporadic and uneven and are no match for the rising cost of living. Moreover, minimum wage is currently the criteria used to determine who should receive government assistance, although minimum wage has not kept pace with rapidly rising prices.⁴

Production

Production in Ukraine declined in 1991 by about 11 percent and is expected to continue falling in 1992.⁴ Ukraine's G.N.P. was 16.2 percent of the former USSR. The republic's annual growth rate in output of goods between 1986 and 1989 was 3 percent.¹

Oil, Gas and Coal Production in Ukraine ⁵			
	Oil*	Gas**	Coal***
1970	13.9	56.7	207.1
1975	12.8	64.0	215.7
1980	7.5	52.8	197.1
1985	5.8	40.0	189.0
1986	5.7	37.0	193.1
1987	5.6	33.2	192.0
1988	5.4	30.2	191.7
1989	5.4	28.7	180.2

UKRAINE: USAID Health Profile (continued)

Oil, Gas and Coal Production in Ukraine¹ (continued)

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

In 1989, Ukraine produced 5.4 million metric tons of oil, only 1 percent of total oil production in the former USSR. Ukrainian oil reserves are largely exhausted.¹

Natural gas production in 1989 was about 29 billion cubic meters, about 4 percent of the total gas production of the former USSR.¹

Ukraine produced 180.2 million metric tons of coal in 1989, or about 24 percent of the total coal production of the former USSR.¹

Iron-ore production in 1989 equaled about 110 million tons of usable ore; in 1990, iron-ore production was approximately 40 percent of the total iron-ore production in the former USSR.¹

INCOME/EMPLOYMENT OVERVIEW

In 1990, ninety-two percent of the Ukrainian population had a per capita monthly income between 75 and 300 rubles.⁴

Approximately 20 million people were employed in Ukraine in 1989. This total is distributed as follows⁶:

Employment by Branch (1989)	
Industry	7,352,000
Agriculture*	1,469,000
Transportation	1,652,000
Communications	263,000
Construction	2,001,000
Public services**	2,718,000
Social security***	1,425,000
Education	1,742,000
Culture & art	370,000
Science & service	542,000
Credit & state insurance	369,000
Administration	369,000
Other	328,000

Employment by Branch (continued)

- 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 :	51.8 million	1990
Crude birth rate ⁷ :	12.7 per 1,000 population	1990
Crude death rate ⁷ :	12.1 per 1,000 population	1990
Infant mortality rate ⁸ :	14.5 per 1,000 live births	1987
Maternal mortality ratio ⁹ :	32.7 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. republics are the often poor quality of care given by physicians and nurses, shortage of medical supplies, pharmaceuticals and equipment, inadequate facilities, and, finally, the population's lack of access to information about basic health practices and family planning.⁴

Aspects of the current health situation in Ukraine are discouraging. Shortages of vaccines and essential drugs may lead to increased morbidity and mortality in 1992. Medical and surgical supplies critical to maintaining basic standards of preventative and curative care are also scarce. Much of the available diagnostic, anesthetic, sterilization and surgical equipment is antiquated, overused or broken.⁴ The number of physicians and hospital beds per 1,000 population in Ukraine in 1987 was 4.3 and 13.3, respectively.⁸

The health of Ukraine's population is affected by environmental hazards. The extensive use of pesticides, inappropriate technologies in chemical and mining industries, the repercussions of the Chernobyl

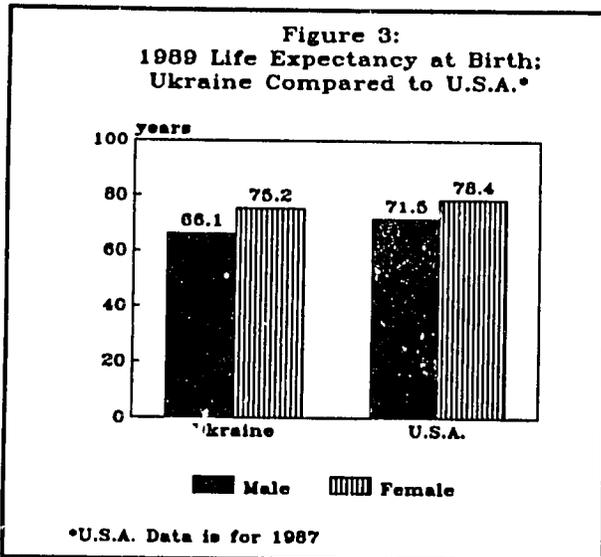
UKRAINE: USAID Health Profile (continued)

accident and the near absence of water treatment systems have all impacted negatively on the Ukrainian people.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 for vaccination programs for children and the elderly, particularly in Kiev. The parts of Ukraine affected by the Chernobyl nuclear accident were also reported to be in critical need of cancer treatment programs.¹⁰

Life expectancy

Life expectancy at birth in Ukraine in 1989 was 66.1 years for males and 75.2 years for females, compared to 71.5 and 78.4 years for males and females, respectively, in the United States in 1987.¹¹



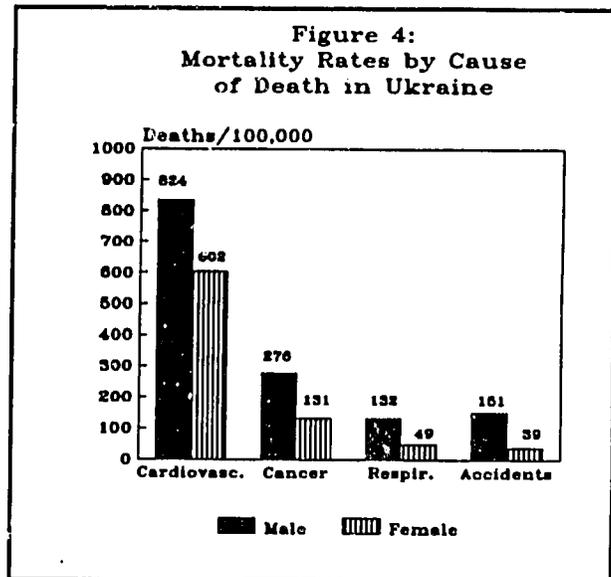
Mortality rates

Since the early 1970s, trends in mortality rates for republics in the former USSR republics have generally followed the trends for the average level of the Union. Mortality rates gradually worsened for more than a decade before steady improvement began in 1985-86, but by the late 1980s, Ukraine, as well as Georgia and Armenia, remained approximately at the 1970 mortality level. Russia was the only republic with a mortality rate lower than in 1970.¹²

Causes of death

The main causes of death in Ukraine are cardiovascular conditions, cancer, accidents and respiratory conditions. In 1988, a total of 1,524.4

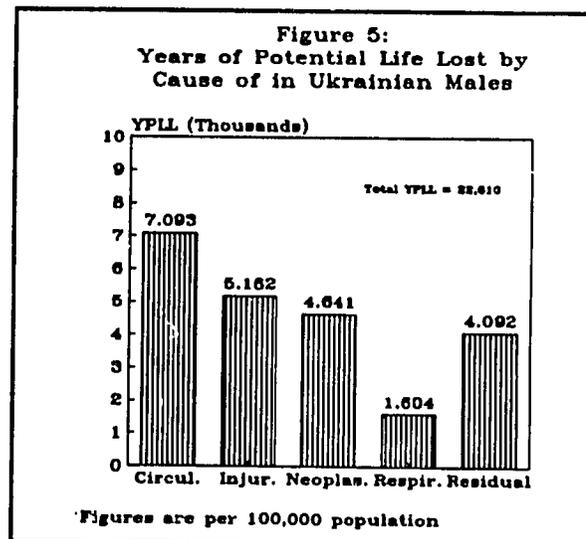
male and 891.3 females (both per 100,000 population) died from these and other causes.⁹



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

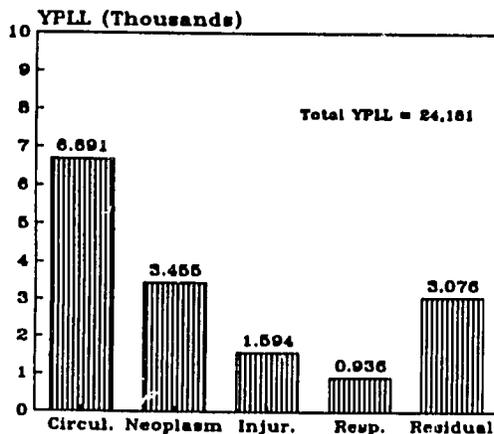
Each year in the Ukrainian republic, males lose a total of 22,610 years of potential life per 100,000 population due to various causes of death. Circulatory conditions are the most common, causing 7,093 YPLL. Deaths caused by injuries total 5,182 YPLL, neoplasms total 4,641 YPLL, respiratory conditions total 1,604 YPLL and other causes (residual) total 4,092 YPLL.¹³

Females in Ukraine annually lose a total of 24,181 years of potential life per 100,000 population due to various causes of death. Circulatory conditions are the most common, causing 6,691 YPLL. Deaths caused by neoplasms total 3,455 YPLL, injuries total 1,594 YPLL, respiratory conditions total 936 YPLL and other causes (residual) total 3,076 YPLL.¹³



UKRAINE: USAID Health Profile (continued)

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



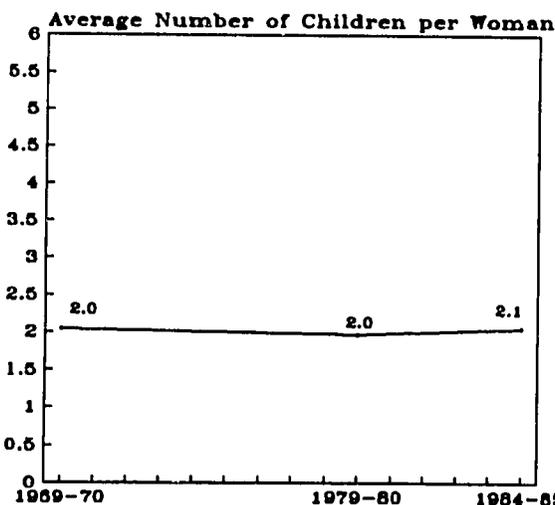
Figures are per 100,000 population

Fertility rate

The fertility rate in Ukraine has increased since 1969. The average number of children per woman in 1969-70 was 2.044. While that number fell to 1.967 in 1979-80, it rose again to 2.055 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 per woman.¹⁶

Figure 7:
Total Fertility Rate in Ukraine



Maternal mortality

The maternal mortality ratio in 1989 was 32.7 deaths per 100,000 live births.⁹ Compared to other national health indicators, this rate is particularly high and is due mainly to substandard conditions. Only 30 percent of all deliveries are described as normal.⁴

The health of mothers and children is jeopardized by the use of abortion as the most common method of controlling fertility. Out of 1.6 million pregnancies in Ukraine, 700,000 are terminated in abortion. Eighty-two abortions are performed per 1,000 women of reproductive age and seven out of 10 abortions do not take place in a hospital setting. For health personnel and the public, there is a lack of information about family planning and limited modern contraceptives.⁴

Over 92 percent of all women in Ukraine work, many of whom work under conditions which put undue demands on women's health and contribute to perinatal mortality. Agriculture and industry employ the majority of women; about 1.5 million are employed in activities requiring heavy labor or which expose them to polluted environments. When the aging process prevents women from performing such physical labor, young women entering the workforce are eager to take these jobs, so the cycle continues. The government is considering legislation to prohibit the employment of pregnant women in jobs involving hard physical labor or chemically hazardous conditions.⁴

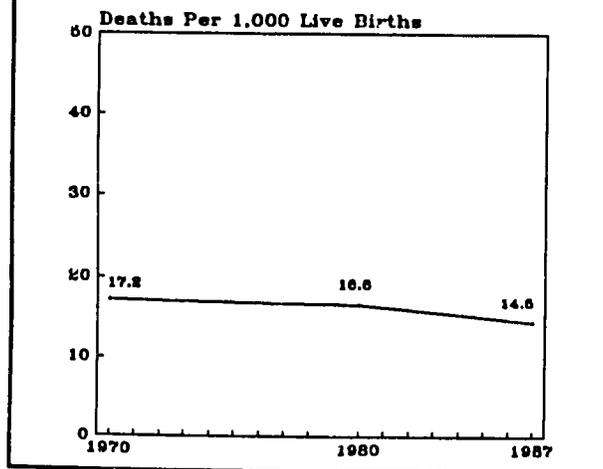
Infant mortality

While the birth rate in Ukraine has declined steadily, falling from 15 births per 1,000 population in 1985 to 12.2 births in 1991, the infant mortality rate has recently increased.⁴ In 1970, the infant mortality rate for the republic was 17.2 deaths per 1,000 live births. By 1980, that number had dropped to 16.6 and by 1987 it was even lower, 14.5.⁸ While the birth rate had fallen to 12.3 deaths in 1990, it began increasing again by 1991, reaching 13.3.⁴

Complications of childbirth such as asphyxia and trauma are the leading cause of infant death, but congenital defects are increasing and now rank second among causes of infant mortality. Diagnostic facilities for prenatal and perinatal conditions are inadequate due to equipment shortages and lack of hard currency for imports.⁴

UKRAINE: USAID Health Profile (continued)

Figure 8:
Infant Mortality Rate in Ukraine

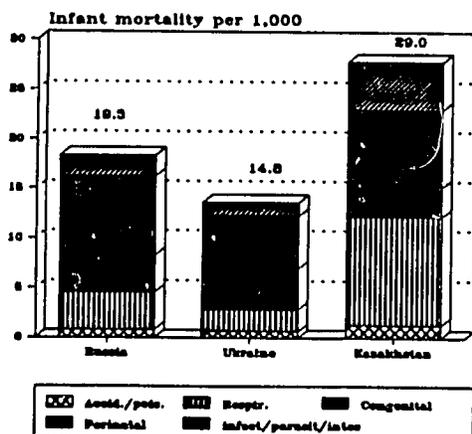


**Infant Mortality Rates (per one thousand live births)¹⁴
According to Place of Residence (1975-86)
Ukraine vs. Former USSR**

	1975		1980		1986	
	Ukraine	USSR	Ukraine	USSR	Ukraine	USSR
Urban	19.7	25.8	17.3	23.5	14.6	21.1
Rural	19.6	37.0	15.4	32.5	15.2	31.4

Of the 14.76 infant deaths (per 1,000 live births) reported in the republic in 1986, 1.34 were caused by infectious, parasitic and intestinal diseases; 2.23 were caused by respiratory diseases; 4.10 were caused by congenital anomalies; 5.27 were caused by perinatal conditions; and 0.63 were caused by accidents and poisonings.¹²

Figure 9:
Infant Mortality Rates (1988) by Cause
In Russia, Ukraine and Kazakhstan



The official Soviet statistics for infant mortality rates understate the actual level 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 for 1990 to be 22.1 deaths per 1,000 live births and for 2010 to be 10.8 deaths.¹⁶

Breastfeeding

Breastfeeding is not thoroughly monitored in Ukraine, and hard statistical data is not yet available. However, nutrition authorities believe the link between breastfeeding and infant nutrition is an important one which has not been recognized.⁴

Other factors also contribute to this situation, including insufficient milk, women's poor nutritional and health status, and, given women's enormous workload, the lack of available time for breastfeeding. Educational levels also play a part: the higher the educational level, the less likely a woman is to breastfeed. There is a growing fear that breast milk could be contaminated with radionuclides from the Chernobyl accident. Thus far, research and monitoring of radionuclide levels in breast milk and common foodstuffs is inconclusive.⁴

Consequently, efforts in Ukraine have been directed at the development and improvement of infant formulas. In the past, formulas have been freely available through special kitchens which provide milk for babies and young children. However, the consequences of economic reform on such social benefits may reduce the amount or availability of formulas and milk.⁴

Family planning and contraception

Family planning services in Ukraine are available in theory only. Ukraine has about 5,000 gynecologist-obstetricians, but their training in reproductive health and modern contraception is very limited. The same is true for midwives and para-medical personnel.⁴

An estimated eight out of every 10 conceptions are unplanned. According to a UNICEF/WHO mission report, a survey in Ukraine revealed that most women get information about contraceptives from their friends or popular publications, rather than from a health professional. Only 18 percent receive information from this latter source. Sex education for the general public or at school is near non-existent.⁴

UKRAINE: USAID Health Profile (continued)

About 17 percent of sexually active women in Ukraine use contraceptives: 13 to 14 percent use IUDs and three to four percent use oral contraceptives. Approximately 1.7 million women used IUDs in 1991, although it is unclear what future demands will be.⁴

Abortion is reportedly the most common method of controlling fertility, according to a UNICEF/WHO mission report in early 1992. Over one million abortions are registered annually. While the number of officially reported abortions is decreasing, a growing number of abortions are now conducted privately where anesthetics are more accessible.⁴

Local production of contraceptives in Ukraine is limited or non-existent. The first plant for production of IUDs in Ukraine was constructed in the town of Belaya Tserkov in 1991. The main obstacle in IUD production is the lack of X-ray sterilization equipment. There is currently no local production of condoms in Ukraine; previously, condoms were imported from Malaysia and China.⁴

HIV/AIDS

Since 1987, intensive screening of the general population has been conducted, including blood donors, pregnant women, patients in hospitals and certain high risk behavior groups. Only 257 HIV seropositives had been reported by early 1992, of which 83 are Ukrainian citizens and 174 are foreigners. Eight cases of AIDS have occurred, resulting in six deaths. However, a UNICEF/WHO mission report in early 1992 states that authorities estimate that these figures do not accurately reflect the current situation in Ukraine and that there could be over 500 HIV-infected individuals in the republic.⁴

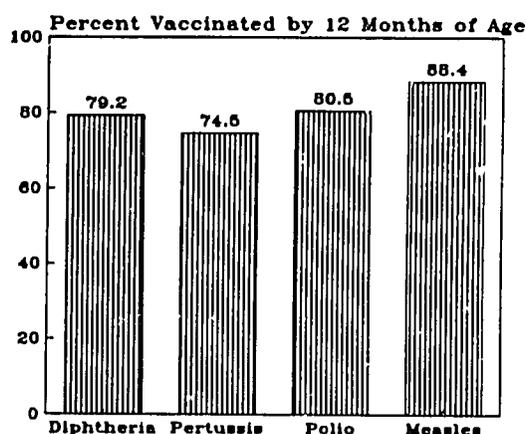
The primary means of HIV transmission among seropositives were sexual, totaling 53 to 56 percent; infection through unscreened blood was 40 percent; and several cases were due to hospital-related contamination. The majority of infected individuals live in Kiev or seaport areas.⁴

The Ministry of Health in Ukraine has established a system for AIDS prevention and control consisting of one national center, eight regional centers and 136 laboratories. Ukraine now manufactures its own HIV screening test; previously, confirmation tests were done in Moscow.⁴

Vaccination coverage

By 1989, vaccination coverage in infants up to 12 months of age had reached the following levels: polio, 80.5 percent; diphtheria, 79.2 percent; and pertussis, 75.4 percent. Vaccination coverage against measles in children by 24 months of age was 88.4 percent.¹⁴

Figure 10:
1989 Vaccination Coverage
in Ukrainian Infants



*Children up to 2 yr for measles vaccine

However, while the incidence of diphtheria was 0.21 reported cases per 100,000 population in 1990, this number increased 10 times in 1991 to 2.1 reported cases. This represents a total of 1,101 diphtheria cases in 1991; 47 people, including 12 children, died of the disease.⁴

The difficulty in acquiring vaccines has contributed to this increase in vaccine preventable diseases. Ukraine does not produce any vaccine within its borders. Since its supplies previously came from numerous institutions in other C.I.S. republics, the breakup of the former USSR and the resulting breakdown of intra-republic trade has created serious shortages in vaccine supplies. Even if these trade systems were fully operational, vaccines would still be difficult to obtain since major producers throughout the C.I.S. have halted production. The prices of vaccines still being produced have increased 20 to 100 times.⁴

While vaccination coverage for all antigens has been relatively good in both urban and rural areas, Expanded Program on Immunization (EPI) authorities estimate real coverage to be about 75 percent. This coverage rate will likely fall due to

UKRAINE: USAID Health Profile (continued)

Ukraine's shrinking vaccine supplies. In addition, the quality and consistency of a cold chain in Ukraine are inadequate.⁴

Drugs and equipment

Ukraine produces only 11 percent of its drug needs and previously obtained about 60 percent of its finished drugs from Moscow. Insulin, anesthetics, antimitotics, bronchodilators and modern antibiotic supplies are now nearly exhausted.⁴

Ukraine currently lacks modern equipment such as ultrasound scanners, X-rays, endoscopies, electrocardiographs, laboratory equipment, surgical tables and instruments, and blood pressure manometers. Only 20 percent of 1992 equipment needs are expected to be covered.⁴

Food and nutrition

Overall, the current average diet in Ukraine contains satisfactory levels of cereals, potatoes and meat, is relatively high in dairy products and sugar, but greatly lacks sufficient fruits and vegetables. In fact, vegetables are often pickled or conserved in brine which reduces vitamin content and increases carcinogenicity.⁴

The economic transition has already caused deterioration in the diet of Ukraine's people. In 1991, people ate five to eight percent less meat, milk and eggs than in 1990. The already low consumption of fruits and vegetables fell by 20 to 30 percent.⁴

Environmental factors in health

The Chernobyl Nuclear Power Plant accident had a massive impact on the health of the population of Ukraine, the C.I.S. and western Europe. A series of USCSAR articles report that twenty-eight people died in the immediate aftermath of the accident and wind carried deadly clouds of black smoke that were 10 times more radioactive than the atomic bomb dropped on Hiroshima.¹⁵

Following the Chernobyl nuclear power plant accident, the former USSR government withheld information for nearly four years concerning the nature and effects of the accident, including the fact that low-level radiation had spread south toward Kiev.⁴

While the effects of Chernobyl have been felt in many areas of the C.I.S., the accident caused specific problems for Ukraine⁴:

- * Approximately 10 to 12 tons of nuclear fuel exploded into the atmosphere; 180 tons are still buried under the ruins of the fourth reactor.
- * Soil, machinery and equipment totalling a volume of 1.2 million cubic meters were contaminated with radioactivity. These materials have been deposited at over 800 sites, all of which must be controlled and monitored.
- * The affected population is facing considerable cancer and genetic risks.

Eleven out of the 25 regions in Ukraine were contaminated.⁴ Contamination has affected 1,500 square kilometers of land; in Russia and Byelarus, the extent of damage was 1,000 and 7,000 square kilometers, respectively. A unified, nationwide system of registering all people affected by radiation was introduced throughout the former USSR. So far, some 650,000 people have been registered. Once on the list, a person remains there even if he or she moves. Individuals registered include some of the more than 600,000 people who have been directly affected by the disaster, including those who were evacuated from their homes and those who took part in the clean-up efforts.¹⁵

The impact of the accident on health is extensive. In the first days following the explosion, 14,000 children were exposed to very high doses of radioactive iodine (over 200 rems). A substantial increase in respiratory diseases, particularly pneumonia and asthma, has been linked to the aftermath of the accident. According to a UNICEF/WHO mission report in early 1992, twenty-five percent of child patients in a 60-bed pediatric hospital near Kiev were receiving respiratory disease treatment. About 60 percent of these children are reported to have some degree of thyroid nodular hyperplasia, especially those living in the most irradiated areas. Thirty-five cases of thyroid cancer among children were reported in Ukraine in 1991.⁴

In late 1989, one-hundred forty-five people were diagnosed as having acute radiation sickness. Fifty-nine people were pronounced disabled, of whom 16 are unable to work at all. An increase in the incidence of thyroid disease has occurred in

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contaminated areas. Newborns fall ill more often than in other areas, and the number of babies born with birth defects has increased.¹⁵

In areas affected by Chernobyl in Ukraine, women's health status tends to be low and there is a high level of anemia.⁴

Much of the concern following the Chernobyl accident has focused on the diagnosis, monitoring and treatment of thyroid-related pathologies, cancers, hematological diseases and genetic defects in newborns of at-risk parents. However, modern technology needed to implement these interventions is in short supply.⁴

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Sources

1. U.S. Information Agency. "Ukraine: Fact Sheet."
2. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Supplement to USA/USSR: Facts and Figures." October 1991.
3. Joint Economic Committee. Congress of the United States. "Gorbachev's Economic Plans." Vol. 1. November 23, 1987.
4. UNICEF/WHO Collaborative Mission with participation of UNFPA, UNDP and WFP. "Ukraine: Crisis and Transition: Meeting Human Needs." February 1992.
5. U.S. Bureau of the Census. U.S. Department of Commerce. "USA/USSR: Facts and Figures." 1988-89.
6. Heleniak, Tim. "Employment by Branch for the USSR and Republics: 1960 to 1989." Center for International Research. U.S. Bureau of the Census. May 1990.
7. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. 1990.
8. Rowland, Diane, and Alexandre V. Telyukov. "Soviet Health Care from Two Perspectives." Health Affairs. Fall 1991:71-86.
9. Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. "Commonwealth of Independent States: Health Status." January 1992.
10. U.S. Agency for International Development and U.S. Department of State. "Health Care Needs of the Commonwealth of Independent States." January 16, 1992.
11. Kingkade, W. Ward. "Health." Center for International Research. U.S. Bureau of the Census. U.S. Department of Commerce. August 1991.
12. Mezentseva, Elena, and Natalia Rimachevskaya. "The Soviet Country Profile: Health of the U.S.S.R. Population in the 70s and 80s-An

Approach to a Comprehensive Analysis." Social Science and Medicine 31.8 (1990):867-877.

13. Kingkade, W. Ward. "Regional Variations in Soviet Mortality by Cause of Death: An Analysis of Years of Potential Life Lost." Center for International Research. U.S. Bureau of the Census. Department of Commerce. August 1991.
14. World Health Organization/Expanded Program on Immunization. February 1991.
15. The U.S. Center for Soviet-American Relations. "Cleaning Up the Environment in the Soviet Union and Eastern Europe." USCSAR Reports 1.4 (Fall 1991).
16. Center for International Research. U.S. Bureau of the Census. Department of Commerce. "Ukraine: 1989-2050 Using Adjusted Population, Fertility, Mortality and Migration." March 1992.

Figures

1. U.S. Bureau of the Census. March 1992.
2. Center for International Research. U.S. Bureau of the Census.
3. Center for International Research. U.S. Bureau of the Census.
4. Center for International Research. U.S. Bureau of the Census.
5. Center for International Research. U.S. Bureau of the Census.
6. Center for International Research. U.S. Bureau of the Census.
7. U.S. Bureau of the Census.
8. Soviet Health Data.
9. Statistical Yearbook 1987. Moscow 1988. Cited in Mezentseva and Rimachevskaya, Soc. Sci. Med. 31(8).
10. Expanded Program on Immunization/World Health Organization.

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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.

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