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## REGIONAL ASPECTS OF MATERNAL AND CHILD HEALTH IN UZBEKISTAN

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### Abstract

The article describes the ecological situation in strengthening the health of mothers and infants in Uzbekistan, the achievements of medicine, ecology, socio-demographic development in the country during the years of independence. During this period, the country has improved its health care system, paid more attention to maternal and child health, as well as reduced the number of deaths of children and mothers under one year of age. It is known that for more than a quarter of a century (1991-2019) the overall mortality rate in the country decreased by 1.2%, or from 6.2 per thousand to 4.9 per thousand per thousand [1]. However, there are still areas with high mortality rates, which can be explained by their location at the transport hub and industrialization. The study and analysis of their regional aspects is one of the important aspects of geographical research.

**Keywords:** : maternal and child health, population health, medical geography, sustainable development, nosogeographic complexes or nosogeographic complexes, infant and maternal mortality, carcinogens, pesticides, industrial cities, maternal and child health, environmental factors.

**Introduction.** Human health is one of the most important issues for any period of social development. Indeed, the state of development of any country is determined by the level of health and literacy of the population living in the region. These two indicators reflect the role of states in the world community and their socio-economic potential.

In the context of globalization and fierce competition, the steady increase in population, the incidence of infectious and non-communicable diseases among the population is growing, and international organizations are paying close attention to combating these problems. In particular, the UN Program for Sustainable Development until 2030 emphasizes [2] "the elimination of epidemics of diseases such as AIDS, tuberculosis, malaria, as well as measures to combat hepatitis and other waterborne diseases by 2030" it is given. Implementation of these tasks requires stabilization of the nosoeological situation in arid climates [3].

A number of measures are being taken in the country to further strengthen the health of the population, modernize the health sector, reduce the number of groups and types of diseases, protect motherhood and childhood. Clause 4 of the Action Strategy for the Further Development of the Republic of Uzbekistan for 2017-2021 states [4]: "...ensuring a reduction in morbidity and life expectancy among the population; health care, first of all, to improve the convenience and quality of medical and socio-medical services to the population.

As a clear example of the attention paid to the health and protection of the population in Uzbekistan during the years of independence, in particular, the Year of Healthy Generation in 2000, the Year of Health in 2005, the Year of Sponsors and Doctors in 2006, the Year of Health in 2014 The Year of the Child, 2016 is the Year of the Healthy Mother and Child, and 2021 is the Year of Youth Support and Public Health.

This year's name is an important historical event, which serves as a program for the training of highly spiritual and

environmentally friendly personnel. Today, it is important to improve the health of the population, a healthy lifestyle in society and the health of the population, especially maternal and child health.

In recent years, our country has given priority to maternal and child health, spiritual and educational upbringing of the younger generation, social protection and improving its quality.

Extensive reforms have been introduced in the country's healthcare system, with a special focus on providing medical care to the population. As a result of centralized polyclinics, rural medical centers, family clinics and maternal and child health promotion, perinatal screening centers have been established in the regions.

As a result, during the years of independence, maternal mortality per 100,000 live births decreased from 65.3 in 1990 to 21.0 in 2017, while infant mortality decreased from 34.6 per thousand to 11.3 per thousand during the same period.

Maternal mortality is related to a woman's pregnancy and is due to the fact that it occurred or worsened during that period, but regardless of the cause of the accident or accident, during or after the end of the pregnancy. is the death of a woman that occurs during the day [5].

Maternal mortality is estimated at 100,000 live births.

It is known that the overall mortality rate varies between different sexes and ages. This is especially true for mothers and babies. Therefore, the Human Development Index usually takes into account maternal and infant mortality. It is also important to study maternal mortality when studying mortality rates. Maternal mortality rates are higher in relatively low-income countries [6].

During the years of independence, our country has paid special attention to the health care system, including maternal and child health. The proclamation of 2016 as the Year of Healthy Mothers and Children has laid an important foundation for the young generation to grow up healthy. As a result of the measures taken in this direction, from 1992 to 2019, maternal and child mortality in our country has

decreased significantly. In particular, the above indicators show a positive change in maternal mortality. It is known that the main causes of maternal mortality are pregnancy and childbirth. The main causes of maternal mortality are bleeding, evening toxicosis, septic complications and extragenital diseases, which require preventive measures in the area.

According to the analysis of the dynamics of maternal mortality in the country, it can be seen that from 1992 to 2017 it changed several times. In 1996, the rate dropped sharply to 20.7 per 100,000 live births, and by 2009 it had risen. The figures for the last year have shown a decline. According to statistics, in 2017, the figure was 21.0. It should be noted that as the number of marriages increases, there is a high probability of changes in maternal mortality in the year following the marriage.

In Uzbekistan, special attention is paid to women, and women's clinics and examinations of women of reproductive age are constantly monitored. Under these circumstances, the observation of maternal and infant mortality poses environmental challenges.

In 2017, maternal mortality in the country was 21.0 per 100,000 live births, with the highest rates in Navoi, Tashkent and Jizzakh regions.

When analyzing the causes of maternal mortality, environmental anomalies in the above regions are relatively common in mothers with chronic anemia, gestosis, acute heart and kidney failure.

**Table 1.**  
**Dynamics of maternal mortality in the Republic of Uzbekistan**

Region	Compared to 100,000 live births							Change index
	1991	1992	2000	2009	2010	2015	2017	
Republic of Uzbekistan	31.8	32.1	33.1	26.2	23.0	18.9	21.0	8.41
Andijan	47.9	52.0	38.1	21.8	18.1	17.8	11.9	8.28
Bukhara	47.8	37.2	48.0	28.2	23.1	7.6	8.1	8.17
Fergana	49.2	38.0	28.4	24.8	27.0	25.1	42.8	8.68
Golistan	31.2	28.4	38.9	24.4	14.1	17.2	26.2	8.31
Jizzakh	31.3	25.2	30.6	49.2	27.2	24.7	29.2	8.58
Kashgariya	32.4	18.8	27.0	30.2	26.1	8.1	21.2	8.82
Khorezm	31.9	18.4	28.4	17.4	18.0	21.6	22.2	8.32
Karakalpakstan	41.2	19.8	24.6	21.8	13.1	18.6	20.8	8.69
Kashgariya	30.8	28.7	23.0	24.8	12.1	5.6	17.8	8.34
Kashgariya	31.8	48.8	27.1	40.2	42.8	44.3	32.8	10.8
Kashgariya	31.8	11.7	27.1	31.2	17.0	12.8	21.2	8.51
Kashgariya	44.2	25.4	24.9	41.2	18.6	13.2	30.8	8.24
Kashgariya	44.7	15.6	30.9	44.8	25.4	27.7	38.2	8.28

Source: Based on data from the State Statistics Committee of the Republic of Uzbekistan.

The data in Table 1 show that the regions of the republic differ from each other in geographical features, geomorphological structure, but also in demographic indicators. While the traditions and values of the ancient settlements have been preserved, the way of life of the population in the newly established areas (after the 50s of the XX century) is partially different from them. This has an impact on demographics. Therefore, the maternal mortality rate is low in Bukhara region. This is the result of the study and implementation of effective medical technologies in the region over the past decades.

The introduction of a comprehensive health program for women and children of reproductive age, the opening of special prevention and treatment centers for children and mothers in hospitals, the expansion of access to various modern contraceptives, as well as the importance of the period between children are important factors in improving maternal and child health. It serves.

Article 65 of the Constitution of the Republic of Uzbekistan stipulates that "motherhood and childhood shall be protected by the state." One of the socio-economic significance of the protection of motherhood

and childhood is that more than half of the country's population are women and 61.5% of the population are children and adolescents. In our country, special attention is paid to the health of mothers and children, pregnant women with anemia are able to form a healthy child under the supervision of doctors. In 2013, 49.2 percent of women were enrolled in the case, down from 38.2 percent in 2016. The decrease in maternal mortality, abortion, low birth weight and child mortality is explained by the fact that our region pays special attention to the health of the population through the welfare program.

Mortality rates by age group are used to study the number of deaths and the factors that occur in each age group. The study and analysis of infant mortality, ie infant mortality under one year of age (0-12 months), is very important in the study of population mortality. This is because in many cases, infant mortality is much higher, leading to a higher overall mortality rate. That's why infant mortality is so special [7].

The study of the components of infant mortality also focuses on perinatal, neonatal, and post-neonatal mortality. These periods are different and cover a certain period of time.

The perinatal period covers the period from 28 weeks of gestation to 7 days after birth. Mortality rates are particularly high during this period of infant mortality, with high rates of death due to birth-related illnesses. Mortality in the neonatal period of infant mortality is the period of death in the period from 7 days to 28 days after birth, during which time infant mortality is partially reduced, caused by certain diseases. The next period is called post-neonatal, which includes the period from 28 days of infancy to 1 year of age. During this time, infant mortality has been studied as a cause of death due to various infectious diseases and accidents.

Another important achievement of the demographic situation in the country in recent years is a significant reduction in infant mortality. If in 1991 the infant mortality rate was 34.6 per 1,000 live births, by 2000 it was 20.2, and in 2017 it was 20.2. Fell to 11.5 people. At the end of 2017, infant mortality in the country decreased compared to the first period of independence, but in Tashkent (17.8), the Republic of Karakalpakstan (15.1) and Khorezm region (14.6) is much higher than the national level.

In Navoi (9.5) and Surkhandarya (9.3) regions, the situation is slightly better than in previous years. Good health care in these areas and a focus on family planning are helping the younger generation to have a healthier world. It should be noted that while some regions have seen a decrease in infant mortality since 1991, others have seen a reversal. In the Aral Sea region, the Republic of Karakalpakstan, Khorezm and Andijan regions still have negative indicators.

It is known that in the past, many children died of infectious diseases and other diseases, but experts say that in 1914, 300 out of every 1,000 live births in Turkestan died, and in some years 600-700 children [8].

In Uzbekistan, it is declining as a result of large-scale advocacy efforts to reduce infant mortality. In some areas, high infant mortality rates are still high due to poor environmental conditions, inadequate access to safe drinking water, and problems with access to health care.

The implementation of preventive measures has a positive impact on the quality of population development. As a result of the efforts made to bring the child into a

healthy world, there is a decrease in infant mortality due to various reasons. This can be seen from the data in Table 2.2.4. However, this figure is much higher than in developed countries, but lower among Central Asian countries. To date, the leading causes of infant mortality are respiratory diseases, perinatal pathology, congenital anomalies, and infectious diseases.

Causal mortality affects all age groups of infant mortality, and is particularly common in children aged 0-1 years, ie infants.

It should be noted that the main part of infant mortality in the country is in the perinatal period. In 2014, perinatal mortality was 59.0 per 10,000 live births, with some regions (Tashkent city and Tashkent region) having a higher rate. In 2016, the situation is expected to worsen. The main reason for this is primarily related to extragenital diseases in mothers, as well as genetic factors, as well as the industrialization of the regions, the density of the transport system and the high demographic capacity.

However, in recent years, the mortality rate for respiratory diseases, acute pneumonia, intrauterine hypoxia, and asphyxia during childbirth has also declined slightly (relative to every 10,000 live births). 27.0). However, the growing number of environmental problems is leading to an increase in the number of babies born with birth defects (10.3). Deaths from birth defects, especially in Tashkent, Fergana and Bukhara regions, account for the highest number of infant deaths due to these causes.

One of the most important groups of diseases that cause infant mortality is infectious and parasitic diseases (3.5 per 10,000 live births). Although the number of infant deaths from these diseases has decreased in recent years, the rates are slightly higher in some parts of the country, including Bukhara and Tashkent.

In general, infant mortality is declining in the regions of the country, but in some regions, such as Tashkent (17.0), Khorezm (15.9), Andijan (15.7) and the Republic of Karakalpakstan (16), it is distinguished by the fact that it is in a slightly higher position. This is due to the fact that the city of Tashkent and Andijan are the largest industrial and transport centers of the country, and some of the above regions are located in the Aral Sea region, which is in a negative nosoeological situation.

In Uzbekistan, 57% of deaths among children under the age of five occur in the neonatal period, ie in the first 28 days of life. Statistical analysis shows that the causes of death include:

- premature birth;
- asphyxia;
- There are three main causes, such as infections

(Figure 1).



Figure 1. Dynamics of maternal mortality in the Republic of Uzbekistan.

Mortality from respiratory diseases, gastrointestinal tract, cardiovascular diseases, chronic liver disease, ENT diseases, and infectious diseases is also common in young children (Figure 2).



According to the UN Global Report on Child Mortality, significant progress has been made in child survival worldwide. Today, millions of children have a better chance of surviving than in the 1990s. However, the report says that despite this achievement over the past two decades, 5.4 million children under the age of five died in 2017 alone. 2.5 million of them did not live more than a month. In Uzbekistan, although significant progress has been made in preventing infant mortality, according to official figures, 57% of infant deaths occur in the neonatal period (within the first 28 days), is happening. "The Uzbek government's efforts to save children's lives are commendable. However, the infant mortality rate in Uzbekistan is still high and this is a matter of concern, as most newborns can be saved," said Sasha Graumann, UNICEF Representative in Uzbekistan.

Improving the delivery of newborn and maternal health services in the provinces is also important for the country's development. Investing in children's health will reduce poverty and stimulate economic efficiency and growth. Improving the nation's gene pool and changing health indicators for the better begins with maternal and child health. In this regard, the protection of motherhood and childhood has always been in the focus of our government.

In particular, the development of a comprehensive action plan for the protection of motherhood and childhood, including improving perinatal care for pregnant women, reducing maternal, infant and child mortality, congenital malformations and hereditary diseases. One of the most pressing issues today is the prevention of abortions, strengthening the material and technical base of maternity hospitals and children's hospitals, equipping them with modern equipment.

At the same time, the achievements of Uzbekistan in the protection of maternal, child and adolescent health in 2014-2020, further strengthening the reproductive health of the population and the implementation of state programs "Year of dialogue with the people and human interests" child health indicators, maternal, child and infant mortality rates, in particular, the introduction of modern technologies for the treatment and diagnosis of pediatric diseases, improving the system of patronage for women and children, as well as staffing and capacity building. Particular attention is paid to improving the situation and the need to develop additional measures.

The following recommendations have been developed to reduce and prevent infant mortality:

- increase women's employment in these areas;
- Provision of pediatricians and gynecologists in these districts;
- Prevention of salt and dust storms and prevention of the population, especially children, pregnant women and the elderly;
- Improving the medical examination of pregnant and women of childbearing age.

Issues related to maternal and child health are of strategic importance in the health care system of our country. The study of their regional aspects requires new scientific research in the field of geography.

**Conclusion.** In summary, mortality, health, and morbidity rates vary widely in mountainous and lowland areas, desert or ancient irrigated agriculture, or in industrialized, high-urban areas. The study and evaluation of such aspects is one of the main issues of tanatogeography.

Reducing maternal and child morbidity and mortality is one of the most global issues in the world. According to the World Health Organization, Uzbekistan has the lowest maternal mortality rate in Central Asia. Neonatal mortality accounts for 63.6% of all infant deaths. On September 7, 2019, the Presidential Decree "On Measures to Further Improve the Provision of Medical and Social Care to Children with Rare (Orphan) and Other Genetic Diseases" was adopted. During 2017-2020, it is planned to carry out construction and repair work at 439 facilities, including perinatal centers, maternity complexes

and primary care facilities, of which 384 (87.5%) facilities were repaired. In Uzbekistan, 57% of infant deaths occur in the neonatal period - the first 27 days of life. These include closer monitoring of maternal health, conditions in maternity wards, medical qualifications, and infant supervision.

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