

# Modern Prospects for the Development of Reproductive Health of Women (Families) According to the Fergana Region

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**Abstract** The article discusses the state of reproductive health of the female population (family) in Uzbekistan, in particular in the Fergana region and modern prospects for improving reproductive health, modern methods of contraception and promotion of a "Healthy lifestyle". Demographic indicators for the Fergana region over the past 20 years and ways to improve the reproductive health of the Fergana region, as a region in Uzbekistan with a very high birth rate, are given.

**Keywords** Reproductive health, Contraception, Demographic indicators

## 1. Introduction

The socio-economic and political changes that have taken place in Uzbekistan over the past 25 years have also affected demographic processes and affected the reproductive, sexual, migratory behavior of people, and family and marriage relations. In the early 1990s Uzbekistan has entered a period of "population explosion", which was caused by the rapid development of health care in the Republic and is almost entirely due to a decrease in mortality due to an increase in life expectancy. The completion of the "population explosion" was an ultra-high birth rate. The same changes were observed in the Fergana region (Figure 1).

And today the demographic future of our country largely depends on the birth rate. An assessment of the current demographic situation in Uzbekistan is necessary to study the dynamics of the main demographic processes, as well as factors of the reproductive health of the population, which largely determines the birth rate. At present, measures aimed at solving demographic problems, preserving and strengthening the physical, spiritual and mental health of citizens, the intellectual potential of the nation, and improving the instruments of demographic and family policy are being actively implemented at all levels of government.

## 2. Dynamics of Demographic Indicators

The population according to the state statistics service - the resident population in the Fergana region as of January 1, 2021 amounted to 3 million 892 thousand 253 people [1]. In terms of population, Uzbekistan (34 million 376 thousand 418) is among the ten largest countries in the world.

According to statistical estimates, by the beginning of 1990 the number of permanent residents of the Fergana region had reached its maximum value - almost 2 million 601 thousand 734 people, and in subsequent years it began to increase. Since 2013, the number of Uzbeks living in the Fergana region began to grow again and as of January 1, 2021, it amounted to 3 million 849 thousand people.

At the same time, starting from 2013, natural population growth (16.4‰) was noted, which in 2014 amounted to 17.2‰, in 2018 - 17.4‰, in 2019 - 18.8‰, in 2020 - 19.1‰ and in 2021 - 20 ‰. An important demographic indicator is the aging of the population, as it reflects changes in the processes of fertility, mortality and life expectancy. In the Fergana region - if in 1990 the average life expectancy was 62.0 years, in 2006-65.0 years, in 2015-67.2 years, then in 2021 - 71.0 years.

One of the important components by which the demographic situation in the country is assessed is the birth rate. Until the 1990s in the Fergana region, relatively stable birth rates were noted (21.3‰), which was due to a rather high percentage of young people who married at the age of 20-24 years. Since the 1990s, an increase in the birth rate has begun in the region and, of course, in the country, which amounted to 24.6 ‰ in 2021. The number of children born in absolute numbers was 55 thousand 448 in 1990, 67 thousand 679 in 2010, 76 thousand 015 in 2015, 85 thousand 423 in 2019, 91 thousand 813 in 2020, and 95 thousand 653 in 2021. respectively.

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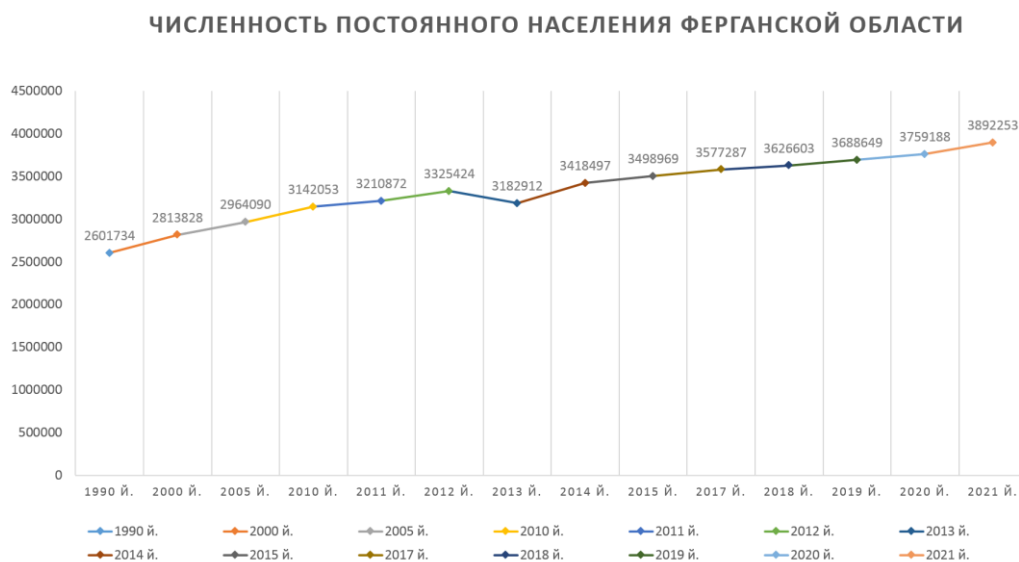
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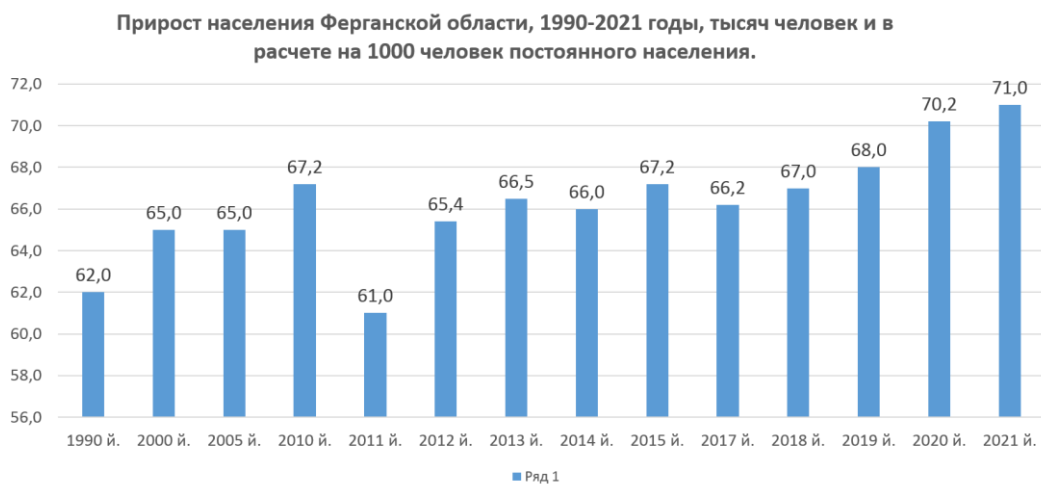
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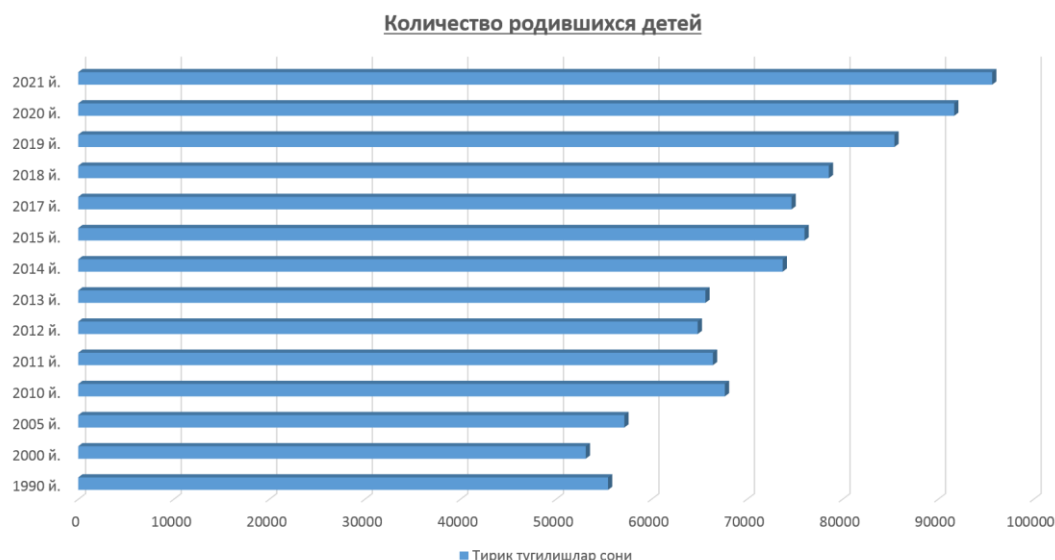
**Figure 1.** Birth rate, mortality and natural increase in the Fergana region from 1990-2021 (according to Uzkomstat)



**Figure 2.** Permanent population of the Fergana region, 1990-2021



**Figure 3.** Population growth in the Fergana region, 1990-2020, thousand people and per 1000 permanent population



**Figure 4.** Number of children born in Uzbekistan in 1990-2020

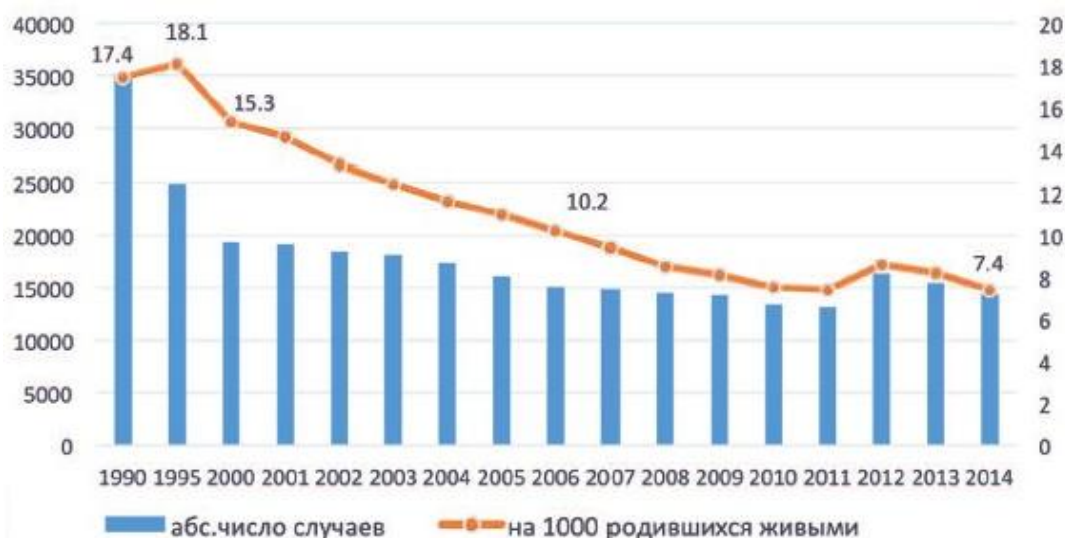
One of the reasons for the growth of this indicator was the achievement of reproductive age by a large cohort of people who were born in the mid-1980s-1990s. There was an increase in the average age of marriage and the birth of the first child from 18.3 years in 1990 to 18 years in 2020.

An increase in the birth rate has been noted in the Samarkand, Fergana, and Kashkadarya regions of Uzbekistan over the past 5 years. Given the significant increase in the mortality rate of the country's population, the President of Uzbekistan and the Cabinet of Ministers adopted laws and orders aimed at improving the quality of medical care for the population and improving the demographic situation. This is the Decree of the President of the Republic of Uzbekistan No. 6110 dated November 12, 2020 "On measures to introduce fundamentally new mechanisms in the activities of primary health care institutions and further increase the effectiveness of reforms carried out in the healthcare system", UP RUz No. 5199 dated July 26, 2021 "On measures to further improve the system of providing specialized medical care in the healthcare sector", GD No. 5198 "On measures to further improve the quality of medical care provided to the population", GD No. 5124 of May 25, 2021 "On additional measures for the comprehensive development of the healthcare sector", UP No. 6099 dated October 30, 2020 "On measures for the widespread introduction of a healthy lifestyle and the further development of mass sports", etc. The result of the implementation of activities within the framework of the developed projects was a gradual, since 2017, decrease in mortality, the level of which in 2014 was 4.6. The decrease in mortality indicates positive trends in the demographic situation of Uzbekistan in recent years. However, this figure is still higher than in developed European countries. Against the background of a general decline in mortality, a high mortality rate for the working-age population remains, which in 2013 amounted to

4.3‰. At the same time, the mortality rate of men of working age is 3.6 times higher than that of women. The main causes of death over the past 25 years have been cardiovascular, oncological diseases and death from external causes. The second ranking place in the structure of mortality was occupied by neoplasms, the level of which was 15.3% (201.1 per 100 thousand population). At the same time, the structure of mortality from malignant neoplasms differs depending on gender: in men, cancer of the lung, prostate and colon occupies the leading place, in women - breast cancer and cervical cancer. Women suffer from cancer more often than men (53.3% and 46.5%, respectively), but men die almost 2 times more often. The average age of detection of cancer in women is 62.9 years, in men - 63.3. The average age of deceased women is 67 years, men 64.9 years. Mortality from external causes, which ranks third, is mainly due to various social causes, and today its level in Uzbekistan is 2 times higher than in developed European countries.

### 3. Child and Maternity Mortality

An important reserve for improving the demographic situation is the reduction of child, primarily infant, and maternal mortality. The latter refers to "reproductive losses", i.e. losses during the reproduction of the population, and are generally recognized criteria for assessing the effectiveness of reproductive and demographic development and an indicator of the socio-economic well-being of society. In 2017, the UN adopted the Millennium Goals, among the main goals of which was to reduce the world's mortality of children under five by 2 times and maternal mortality by 1.5 times. In the region in 1990, the mortality rate of children under the age of five in the Fergana region reached 18.7‰, in 2010 - 14.2‰, in 2013 - 13.5‰, in 2017 - 11.6‰, in 2018 - 9.4‰ and in 2021 - 8.9‰.



**Figure 5.** Infant mortality in the Fergana region in 1990-2021 according to the State Statistics Committee

The dynamics of infant mortality in Uzbekistan over the past 25 years has been characterized by a 2-fold decrease in its level (from 18.7‰ per 1,000 live births in 1990 to 8.9‰ in 2021). A decrease in this indicator was noted in all regions of Uzbekistan, which was facilitated by the creation of numerous perinatal centers within the framework of the national project "Healthy Mother - Healthy Child". It should be noted that the maximum rate of reduction in infant mortality has been observed in recent years: if for the period 1991-2000, the infant mortality rate decreased by only 0.9%, then from 2010 to 2020, this figure has almost doubled. However, the achieved level of infant mortality is still 2-3 times higher than in European countries.

In the structure of the causes of infant mortality in the region, the first place (44.5% -47.5%) is occupied by diseases of the perinatal period - a condition associated with immaturity, the second (22.9% -24.4%) - congenital anomalies of development, the third (8.8% -9.7%) - infections, and the fourth place - asphyxia. To reduce the level of infant mortality, further measures are required to improve the effectiveness of systems for the prevention of pathology of pregnancy and nursing of the newborn. There is a need for a general development of the health care system, which includes advanced training of medical workers, the development of a three-level system for providing medical care to pregnant women, women in childbirth and newborns, strengthening primary health care and intensifying work to promote a healthy lifestyle. Maternal mortality is associated primarily with living conditions, the health of pregnant women and the level of medical care. This indicator allows you to evaluate all losses of pregnant women (abortions, ectopic pregnancy, obstetric and extragenital pathology during the entire gestation period), women in labor and puerperas within 42 days after the end of pregnancy. In Uzbekistan, in the last decade, the maternal mortality rate has remained high compared to economically developed countries and has averaged 25 per 100,000 births in the last 5

years. This is 2-3 times higher than in a number of European countries (Great Britain, France, Germany, Canada and Switzerland). Innovative technologies that contribute to the preservation of women's health have been introduced, the material and technical base of obstetric institutions has been improved, state social guarantees have been implemented in the field of family support, motherhood and childhood. (PK No. 60, PK No. 216 of 2022). The greatest weight of maternal mortality falls on the age of the highest fertility (20-30 years), the highest values of this indicator were noted in primiparas, and with an increase in the number of births, maternal mortality increases. According to the State Statistics Committee in 2020, more than 50% of maternal deaths were caused by bleeding, obstetric embolism and severe EGP. To further reduce and prevent maternal mortality, it is necessary to carry out primary prevention of non-communicable diseases, develop a system for screening the health of pregnant women at the level of antenatal clinics (Ayollar maslahatkhonasi, Usmir kizlar reproductive markazi, Prenatal screening honalasi, etc.), expansion of perinatal centers (PC No. 216), the creation of inter-district perinatal centers, the improvement of intensive and resuscitation care for pregnant women, women in childbirth and puerperas, the creation of intensive care units and intensive wards for newborns, the improvement of the sanitary culture of the population, the improvement of family planning services. In the current socio-demographic situation, the state of reproductive health is one of the most important factors ensuring the growth of the country's population and its demographic stability in the long term.

The concept of the demographic policy of Uzbekistan for the period up to 2025, approved by the "Law on the reproductive health of citizens of the Republic of Uzbekistan" of 2018, determined the strengthening of reproductive health and the institution of the family as priority areas of state policy, since not only the birth rate depends on them, but also viability of future generations. Along with reproductive

health, indicators of certain changes in the demographic situation are also the reproductive potential of the population, the reproductive potential of a person, reproductive losses and reproductive behavior. The reproductive potential of the population is the ability of the population in a certain territory to reproduce. The reproductive potential of a person is the level of the physical and mental state of the body, which allows, upon reaching social maturity, to reproduce healthy offspring. Reproductive potential is considered fully realized if each pregnancy ends in childbirth. Reproductive losses are losses in the process of carrying out the function of reproduction of offspring: spontaneous abortions, induced abortions, maternal mortality, perinatal mortality, infant mortality during the first year of life. Reproductive behavior is an integral system of actions, relationships and mental states of a person aimed at the birth or refusal to give birth to a child of any order, in marriage and out of marriage. Structurally, within the framework of reproductive behavior, the following are distinguished: natural reproductive behavior - a set of behavioral acts and decisions directly aimed at the birth of a child; contraceptive behavior - actions aimed at preventing conception; abortive behavior - actions aimed at preventing an unwanted birth. Reproductive health protection includes a set of factors, methods, procedures that are aimed at supporting reproductive health and helping to improve the well-being of a family or an individual by preventing problems related to reproductive health.

#### 4. Women's Reproductive Health

The reproductive health of a woman implies the absence of diseases of the reproductive system, the ability to reproduce, and determines the number of children in the family: today, 65.5% of families in Uzbekistan have 3 or more children, and only 7.9% have 1-2 children. Among the entire population of Uzbekistan, the number of women is more than 53%, of which 27.5% are of reproductive age. However, according to forecasts, the number of women in the most active reproductive age (20-29 years) may increase to 7.5 million by 2021 compared to 2014.

Women's reproductive health depends on many factors: heredity, lifestyle, occupational hazards, diseases of other organs and systems. In Uzbekistan, women's reproductive health is deteriorating. To date, the absolute number of healthy women does not exceed 6%. The reproductive situation is aggravated by an increase in the frequency of gynecological diseases, including sexually transmitted infections (STIs), a high rate of abortions, and infertility.

Currently, a high level of gynecological morbidity remains - they are detected in approximately 20% of Uzbek women and girls. Over the past 5 years, there has been an increase in the incidence of endometriosis (by 46%), inflammatory diseases of the genitals (by 30.5%), and the number of cases of menstrual dysfunction has increased. The incidence of sexually transmitted infections in women leads to the development of pregnancy pathology, an increase in

the frequency of miscarriage, premature birth, an increase in the number of premature and underweight children and children with congenital malformations. In women with more than one miscarriage in history, a sexually transmitted infection is found 4 times more often than in healthy women. Even infections that are currently considered almost harmless (ureaplasma and mycoplasma) lead to severe disorders in the fetus. The reason for this is the violation of the microbiome of the placenta by microorganisms, which leads to its incorrect formation. This entails malnutrition of the fetus, complicated pregnancy and possible spontaneous abortion. Incorrect "fragmentary" attachment of the placenta also leads to a complicated course of childbirth, including an increased risk of bleeding and the development of sepsis. In addition, the percentage of related marriages remains high in Uzbekistan. Of these related marriages, in 24.9% of cases, children are born with developmental anomalies. In 2021, in May-June, a sociological survey was conducted among 6,974 citizens from 200 districts of Uzbekistan. Among related marriages in 25% of cases, families often quarrel, conflicts arise because of trifles and often lead to divorce. In 25% of related marriages, children are born with developmental anomalies and disabilities. 9% of families had health problems, which also caused strife and divorce. In all related marriages, their grandparents were the leaders in 58% of cases, fathers and mothers in 56%, aunts and uncles in 14%, and only in 8% of marriages did the newlyweds agree to this marriage. All of the above requires the use of high-tech methods of treating women and nursing newborns (incubators, resuscitation complexes and surfactant, the presence of oxygen stations that provide a constant flow of oxygen), which costs the state 250-300 times more than medical care for healthy women in labor and children. The number of abortions still remains one of the highest, despite the annual downward trend. According to Uzkomstat, over 30% of all pregnancies in Uzbekistan end in abortion. Up to 16.8% of abortions give various complications, 7-8% of women become infertile after them. An important factor in maintaining or terminating a pregnancy is the degree of readiness of a man to become a father and raise a child. Now every sixth woman in Uzbekistan terminates a pregnancy because her partner already has a family, or enough children.

#### 5. Men's Reproductive Health

Currently, there are no government programs to protect male reproductive health and support responsible fatherhood. At the same time, only 1% of men turn to a specialist - andrologist at the place of residence. It should be noted that the level and quality of specialized care for male patients with diseases of the reproductive system is currently insufficient. The specialty "andrology" is not indicated, it exists only de facto. And issues of male reproductive health are solved by urologists. There are no national standards for the treatment of reproductive disorders in men.

## 6. Infertility

There is concern about the high prevalence of infertility, both male and female. According to a number of studies in Uzbekistan, the frequency of infertility in marriage reaches 16% and there is no tendency to reduce it. At the same time, the World Health Organization claims that if the frequency of infertility in a country exceeds 15%, this becomes not only a medical, but also a socio-demographic problem. According to the Scientific Center for Obstetrics and Gynecology of the Ministry of Health of the Republic of Uzbekistan, in Uzbekistan today 2-3 million women and 1-2 million men are infertile. In the structure of infertility, up to 45% are women and 40% are men. It has been established that every seventh married couple in Uzbekistan faces family planning problems due to infertility. The number of divorces among childless couples is on average 6-7 times higher than in families with children. However, with the right approach to treatment, childless couples can be considered as a reserve for the birth of desired children. Many forms of diseases of the reproductive system of an adult are rooted in childhood. More than 24% of them, including infertility, are due to congenital malformations of the organs of the genitourinary system. The reasons for the high prevalence of infertility in Uzbekistan are also stressful and psychological factors, early onset of sexual activity and the high prevalence of behavioral risk factors, especially among young people. The consequence of irresponsible sexual behavior is a high incidence of infections that lead to complications of pregnancy and childbirth, as indicated by every sixth woman in Uzbekistan.

The widespread use of drugs to stimulate ovulation (clostilbegit, hCG in large doses) that are used for ART in most cases lead to the fertilization of not one, but several eggs, which leads to multiple pregnancy (triplets, quadruplets, sixths). Multiple pregnancy, as we know, leads to miscarriage, high neonatal and sometimes maternal mortality, to prolonged stay and treatment of children in intensive care units and resuscitation of newborns. After cases of ovarian hyperstimulation, such ovaries may not respond to any hormonal treatment in the future and this more often leads to ovarian cancer.

inflammatory diseases of the genitourinary system (more than 60%). According to the WHO, STIs are among the top five categories for which people seek medical attention. Over the past five years, their frequency has increased by 1.5 times, and the contribution of these diseases to the deterioration of the reproductive health of the population is more than 50%. The decisive role in improving the reproductive health of young people is played by reproductive behavior, which today requires close attention.

To change the current situation, it is necessary to strengthen the role of the family, preserve family values, foster responsible motherhood and fatherhood, increase the prestige and importance of men in the family, and create favorable material conditions for the birth and upbringing of children. Strengthening the institution of the family should be one of the main state priorities, and only through joint efforts is it possible to revive and strengthen the family foundations. The main goals and objectives of improving the reproductive health of women of childbearing age are:

**Goal:** to improve the quality and unify approaches to the provision of family planning services, including the selection of a contraceptive method based on available evidence.

**Objectives:** - to reduce the frequency of unwanted pregnancies and the risk to women's health associated with it;

- reduce maternal and child mortality rates;
- reduce the number of pregnancies among adolescent girls;
- prevent STIs and HIV infections within the framework of service delivery;
- to provide families and couples with the right to make a free and informed decision in choosing safe and effective methods of contraception in order to create a healthy family;
- ensure broad access for all who wish to use contraceptive methods, including young people, people living with HIV/AIDS and people with disabilities;
- strengthening the institution of the family, the revival and preservation of the spiritual and moral traditions of family relations.

## 7. Reproductive Health of Adolescents and Youth

About 60% of diseases in childhood and adolescence can pose a threat to fertility. Up to 80% of adolescent girls and 40% of boys under the age of 18 have serious deviations in reproductive health.

The main problems of adolescent girls are associated with malformations of the genital organs (4% of all developmental anomalies), delayed puberty, endometriosis, dysmenorrhea (menstrual disorders in 30% of girls lead to a decrease in reproductive potential in the future), polycystic ovaries, deficiency of ovarian reserve, early sexual debut,

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