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HEALTH OF THE NATION

CHANGES AND SOLUTIONS FOR CENTRAL ASIA

ЗДОРОВЬЕ НАЦИИ

ВЫЗОВЫ И РЕШЕНИЯ ДЛЯ ЦЕНТРАЛЬНОЙ АЗИИ



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Relevance of the topic

Diabetes ranks second among metabolic diseases worldwide. Considering that diabetes can be asymptomatic, scientists suggest that the actual number of diabetes patients may be significantly higher. The main causes of diabetes include poor nutrition, genetic predisposition, obesity, stress, psychological pressure, and hormonal disorders. Diabetes is a chronic disease that occurs when the body produces an insufficient amount of insulin or when cells cannot properly use it. There are three types of diabetes: type 1 diabetes, type 2 diabetes, and gestational diabetes. Currently, Uzbekistan has established various opportunities for diabetes patients in terms of medical supervision, access to medications, and healthcare services from both the state and private sectors. Additionally, the government provides preferential access to essential medications such as insulin and blood sugar-lowering drugs. Patients with type 2 diabetes can receive Metformin, while children, pregnant women, and people with disabilities have priority in receiving subsidized medications.



Keywords

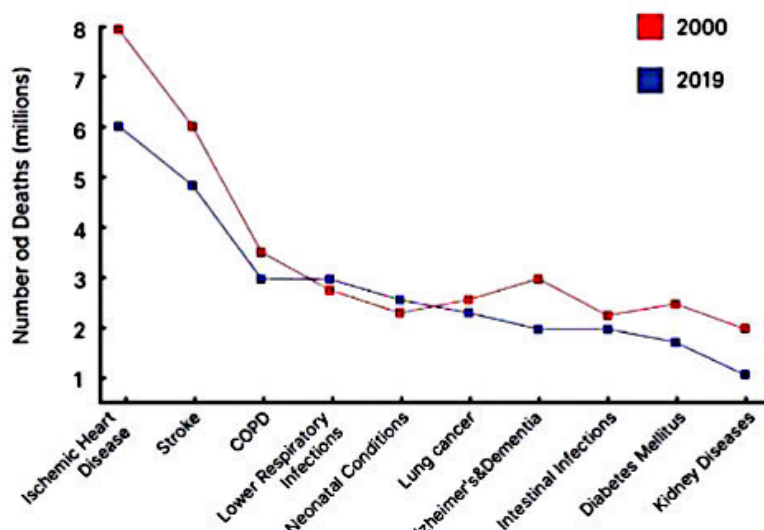
diabetes mellitus, insulin, hyperglycemia, insulin resistance, metabolic syndrome, endocrinology, obesity, risk factors, prevention, diabetes diet, physical activity, drug therapy, regulatory framework, preferential drug provision, medical assistance, diabetes control

Abstract

According to estimates by the World Health Organization, in 2022, there were 529 million people worldwide suffering from diabetes, and by 2050, this number is expected to reach approximately 1.5 billion. In Uzbekistan, the number of diabetes patients exceeds 245,000, including more than 2,300 children and 879 adolescents. Currently, Uzbekistan is experiencing an increase in diabetes cases. The main reasons for this include urbanization and lifestyle changes, population growth and aging, obesity, low physical activity, genetic

predisposition, and improved screening and diagnostics. According to the latest data, in 2021, more than 245,000 patients with diabetes were registered in Uzbekistan, including over 2,300 children. The COVID-19 pandemic has also contributed to the increase in the number of diabetes patients in Uzbekistan. The COVID-19 virus exacerbates inflammatory processes in the body, increases insulin resistance, and contributes to the progression of diabetes or the detection of previously undiagnosed cases.

Leading causes of mortality in the World (2000-2019)



Given the above, large-scale programs for diabetes treatment have been developed in the Republic of Uzbekistan, including: Presidential Decree No. PP-4295 of the Republic of Uzbekistan dated April 19, 2019 As part of the National Program for Improving Endocrinological Care for 2019–2021, the following measures were implemented: new diagnostic and treatment standards were introduced, 75,000 patients were provided with free insulin funded by the state budget (over 40 billion soums), and the material and technical base of 14 regional endocrinology institutions was strengthened (200 billion soums) [3].

Key directions for 2022–2024: Improving the endocrinology service, early diagnosis of endocrine diseases, development of a patronage service, enhancement of laboratory research, professional development of doctors, advancement

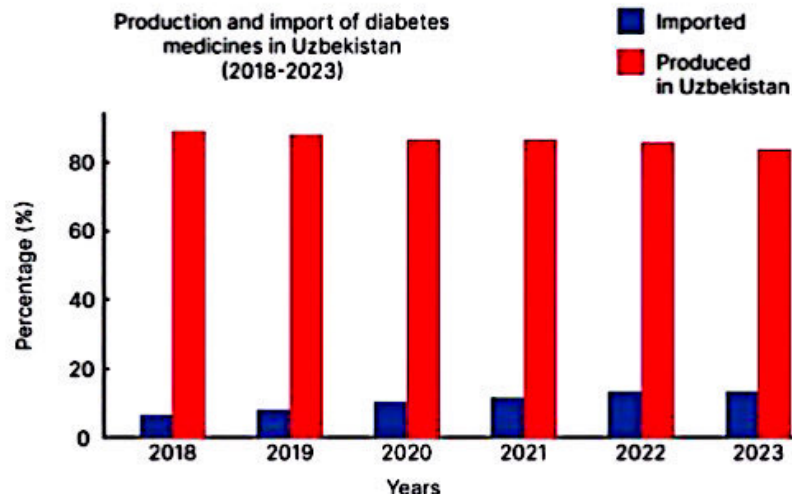
of the pharmaceutical sector, promotion of a healthy lifestyle, provision of free medication to citizens with chronic diseases who qualify for benefits, and decentralized drug distribution.

Starting in 2025, a reimbursement program will be implemented in Tashkent, following its successful trial in the Syrdarya region (2020–2024). Under this program, patients with hypertension, coronary artery disease, type 2 diabetes, asthma, COPD, and other conditions will receive 27 types of medications free of charge. Based on an electronic prescription issued by a family doctor, medicines are dispensed at pharmacies cooperating with the State Health Insurance Fund. Patronage nurses oversee medication intake and conduct educational outreach. The program aims to provide systematic treatment for chronic diseases, improve drug accessibility,

promote prevention, and encourage citizens to take responsibility for their health. By the end of 2026, the program will cover all regions of Uzbekistan.

For diabetes patients in Uzbekistan, the following medications are available: Insulin products, Oral hypoglycemic agents: Emaglif, Zhardi, FaroZhardi, Diampa, Jardins, Siofor, Diaformin, Metformin, Metforvin, Asformin, Metfogamma, Glucofa, Metaphage,

Panfor, Insufor, Merifatin. Some of these drugs are manufactured in Uzbekistan, including "Metformin Dentaflil" tablets and "Fitodiabetol" syrup. However, many medications are imported and registered in Uzbekistan. For example, insulin products "Insulatard" and "Actrapid Penfill" are imported from Denmark, "Siglip-M" comes from Pakistan, and "Aptin-M" is imported from Bangladesh.



A chart illustrating the dynamics of domestic production and import of diabetes medications in Uzbekistan shows that blue bars represent local production, while red bars indicate imported drugs. It is evident that the share of local production is gradually increasing, although imports still dominate. The Ministry of Health of Uzbekistan has approved a list of medications used to treat diabetes, as specified in the Cabinet of Ministers Resolution of the Republic of Uzbekistan No. 204 dated 22.07.2013 "On measures for further improvement of the procedure for providing certain categories of individuals with medicines on a preferential basis" [1]. This list was updated

in 2023. Diabetes medications are among the most commonly used drugs, with insulin preparations being prescribed for both type 1 and type 2 diabetes. According to the Laws of the Republic of Uzbekistan: Law No. 265-I "On the Protection of Citizens' Health" (29.08.1996) [2], Law No. ZRU-399 "On Medicines and Pharmaceutical Activities" (04.01.2016) [3], Cabinet of Ministers Resolution No. 204 (22.07.2013) on preferential drug supply, 14 categories of individuals are eligible for free medications, including diabetes patients. They are provided with the following internationally recognized medications free of charge:

Table 1

Medication	Dosage&Strength
Desmopressin/Vasopressin	Nasal drops 100 mcg/ml, 5 ml
Biosynthetic human insulin analogs	Suspension, 100 IU/ml, cartridge 3 ml; Insulin pen, 100IU/ml, suspension 10 ml; Suspension 100IU/ml, 5 ml
Glibenclamide	Tablets, 1.75 mg; 2.5mg; 3.5 mg
Gliclazide	Tablets, 30 mg; 60 mg; 80 mg
Metformin	Tablets, 500 mg; 850 mg; 1000 mg

Table 2. Supply of Diabetes Medications (2022–2024)

Medication	2022 year			2023 year			2024 year		
	Domestic	CIS	Foreign	Domestic	CIS	Foreign	Domestic	CIS	Foreign
Desmopressin/Vasopressin	-	3	1	-	2	2	-	3	2
Bisynthetic insulin analogs	3	8	35	3	8	23	-	5	21
Glibenclamide	2	1	-	2	1	-	2	1	-
Gliclazide	3	5	5	3	5	4	3	5	4
Metformin	6	7	23	7	7	20	7	7	16
Total preferential medicines	1463			1357			1284		

In 2022, 13.72% of diabetes medications were domestically produced, 23.5% came from CIS countries, and 62.74% were imported. Diabetes medications accounted for 6.97% of all preferentially supplied drugs. In 2023, local production increased to 17.24%, while CIS-sourced medications

rose to 26.44%, and imports decreased to 56.3%. Diabetes drugs comprised 6.4% of all preferential drugs. In 2024, domestic production was 15.8%, CIS-sourced drugs were 27.6%, and foreign imports were 56.6%. The share of diabetes medications among preferential drugs dropped to 5.92%.

Conclusion

As in many countries worldwide, the number of diabetes patients is increasing in Uzbekistan. In response, the government continues to enhance drug accessibility for patients. While domestic production of diabetes medications is rising, imports still dominate the market. In recent years, the government has actively improved access and quality of medical care, including new initiatives like drug reimbursement programs, allowing patients with chronic diseases (including diabetes) to receive free medications. Key measures to combat diabetes include: Further development of the pharmaceutical sector Medical staff training Advancements in diagnostics Overall, government and healthcare efforts aim to improve the quality of life for diabetes patients and enhance access to modern treatments.



Preferences

1. Cabinet of Ministers Resolution No. 204 (22.07.2013) – "On measures for further improvement of the procedure for providing preferential medicines."
2. Law No. 265-I (29.08.1996) – "On the Protection of Citizens' Health."
3. Law No. ZRU-399 (04.01.2016) – "On Medicines and Pharmaceutical Activities."
4. Presidential Decree No. PP-4295 (19.04.2019) – "On improving endocrinological care in Uzbekistan (2019–2021)."
5. National Endocrinology Improvement Program (2019–2021) – Ministry of Health of Uzbekistan.
6. State Register of Medicines and Medical Devices of Uzbekistan.