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Prevalence of type 2 diabetes in Ukraine: regional characteristics and growth trends based on 2013–2022 data

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Abstract. Type 2 diabetes (T2D) is one of the leading non-communicable pandemics. In Ukraine, officially registered prevalence remains lower than in most Central and Eastern European countries; however, substantial underdiagnosis may mask the true epidemiological situation. **Aim:** to assess the dynamics of T2D prevalence in Ukraine and neighboring countries during 2013–2022 and identify regional differences within Ukraine (2013–2017). **Material and methods.** Open data from World Health Organization (WHO), Institute for Health Metrics and Evaluation (IHME), Global Burden of Disease, the Public Health Center of the Ministry of Health of Ukraine, and the State Statistics Service of Ukraine were used. Age-standardized prevalence and incidence per 100,000 population were calculated, and correlation and regression analyses were performed. **Results.** In 2022, the age-standardized prevalence of T2D in Ukraine was 4,449 per 100,000 (an increase of 24.2% since 2013), the lowest value among six Central and Eastern European countries: Ukraine, Slovakia, Slovenia, Czech Republic, Croatia, and Poland (with regional average of 34%). When adjusted for underdiagnosis, the true prevalence may reach ~7,400 per 100,000. During 2013–2017, the highest baseline prevalence was recorded in the Chernivtsi, Khmelnytskyi, and Cherkasy regions, whereas the most rapid growth occurred in predominantly rural western regions (an inverse correlation with urbanization level, $r=0.49$). **Conclusions.** The officially low prevalence of T2D in Ukraine is largely an artefact of underdiagnosis. The fastest registered growth is observed in rural western regions, which is associated with improved case detection and population aging. The high dispensary coverage in the Ivano-Frankivsk region indicates effective organization of care; however, stable incidence and accumulation of chronic cases necessitate intensified primary prevention of obesity and early screening. **Keywords:** type 2 diabetes, prevalence, regional differences, Ukraine, Ivano-Frankivsk region, aging.

Introduction

Diabetes mellitus is one of the most common non-communicable diseases worldwide, posing a significant socio-economic problem for the health-care system in both developed and developing countries. According to Global Burden of Disease data, in 2017, diabetes ranked 7th in the world in

terms of years of life lost adjusted for quality of life (QALY – quality adjusted life years) [1]. As reported by the WHO, the prevalence of diabetes worldwide in the 21st century is steadily increasing, becoming a global non-communicable epidemic [2]. According to estimates by the International Diabetes Federation, approximately 589 million adults worldwide live with diabetes, and by 2050, this

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number is expected to rise to over 852 million [3].

In 2024, diabetes caused more than 3.4 million deaths, and the economic cost of treating and preventing the disease reached hundreds of billions of dollars [3]. There are several types of diabetes, among which T2D is the most common type, accounting for over 90% of all diabetes cases worldwide [3]. T2D is characterized by the development of insulin resistance, a pathological condition in which insulin-sensitive cells (such as muscles, liver, and adipose tissue) lose their ability to respond to normal insulin levels and take up glucose from the blood, leading to elevated blood glucose levels [4].

The prevalence of T2D is increasing worldwide, including Ukraine. According to the International Diabetes Federation report, Ukraine is among countries with a moderate level of estimated diabetes cases, with over 2 million adult cases in 2024 [3]. However, these data are not based solely on official Ukrainian data but on extrapolations from neighboring countries (Belarus, Georgia, etc.). According to the National Health Service of Ukraine, as of November 2025, there are 1,320,723 patients with diabetes registered in the electronic health care system [5], but the actual number of patients may be significantly higher, up to 2.5 million of undiagnosed cases, in particular due to the absence of visible health problems in the early stages of the disease and low rate of preventive checkups [6].

Our previous research showed that socioeconomic disparities, such as income inequality, limited access to healthcare, and low levels of health literacy, exacerbate the burden of T2D in Ukraine [7]. In western regions of Ukraine, such as Ivano-Frankivsk, Chernivtsi, and Ternopil, the prevalence of diabetes is generally lower than in the eastern and southern regions of the country. However, during 2016-2023, a sharp increase in diabetes incidence has been observed in the western regions of Ukraine [6], partly due to changes in the population's lifestyle and eating habits [6-8]. It should be noted that in Ukraine, T2D is often diagnosed at late stages due to the absence of early symptoms [9]. About 13.3% undiagnosed pre-diabetes cases among adults over 18 years of age were found in the Ivano-Frankivsk region by Community-based screening [8].

Analysis of diabetes prevalence in the region is important for assessing epidemiological characteristics and developing regional strategies to prevent and treat this disease.

The aim of this study is to assess the dynamics of T2D prevalence in Ukraine and neighboring countries during 2013-2022 and identify regional differences within Ukraine (2013-2017), in particular to analyze the prevalence and dynamics of T2D among the adult population of the Ivano-Frankivsk region (Ukraine) based on official medical statistics from 2013 to 2022.

Material and methods

Data sources. For this study, we collected data from open statistical sources on population counts (WHO [9], IHME [10], Ukrainian government statistics [11]). Data on the prevalence of T2D in regional populations of Ukraine were collected from the Public Health Center of Ukraine (<https://phc.org.ua/monitoring-i-statistika/meddata>) and international prevalence data from global health databases [3, 10]. According to the standard classification of data sources, administrative medical reporting forms are categorized as secondary data sources because they contain aggregated, and therefore anonymized, information. In terms of accessibility classification, such medical reporting is categorized as public data. The observation period, from 2013 to 2022, is sufficient to demonstrate a clear trend. The data selection criteria included: T2D, reported separately by age groups.

Official regional data on the prevalence of T2D in Ukraine after 2018 are incomplete or restricted due to the Russian invasion: Luhansk, Donetsk regions, and the Autonomous Republic of Crimea were not taken into account due to the lack of accurate data. For these territories, data provided by the WHO were used.

Data analysis. Statistical analysis methods included descriptive statistics, prevalence estimation (per 100,000 population), normality testing, and correlation analysis. We used <https://www.mapchart.net/>, Google Colab, and Excel to create maps, tables, and charts. Absolute data in the reports were normalized to a population of 100,000. Population data until 2017 were obtained from official statistics on the website of State Statistic Service of Ukraine [11]. Since 2018, data broken down by region in Ukraine have been unavailable or incomplete due to the 2018 medical reform and the ongoing state of war with Russia since 2022. The distribution by age categories was carried out according to the morbidity data. Standardization was carried

out in accordance with statistical data on the population from official sources; data for comparison with other countries were obtained from IHME [10]. In Ukraine, according to official government statistics, T2D was not detected in the 0-14 and 15-17 age groups during the specified years (2013-2017) [12, 13].

To assess the conformity of data on the number of patients with T2D in Ukraine with normal distribution, an analysis was performed using a Q-Q plot (**Fig. 1**). The figure shows a Q-Q plot with a sample mean of $\mu = 28.19$ and a standard deviation of $\sigma = 4.42$. The number of points lying close to the reference line indicates that there are no significant deviations from the normal distribution, since most empirical values fall within the confidence percentiles. Thus, it can be assumed that the distribution of the number of patients with T2D in the sample does not deviate significantly from the normal distribution.

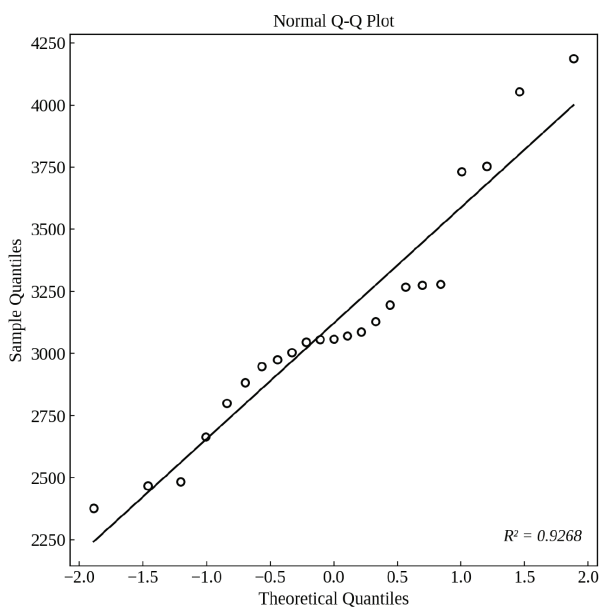


Fig. 1. Normal Q-Q plot illustrating that the distribution of diabetes cases in 2017 in Ukraine closely follows a normal distribution ($\mu=28.19$, $\sigma=4.42$).

Results and Discussion

The prevalence of diabetes in European countries

As of 2022, the prevalence of diabetes among adults aged 18 years and older shows considerable variation across European countries (**Fig. 2**). According to WHO data, prevalence rates ranged from 3.46% in Denmark to 19.68% in Bosnia and Herzegovina [14]. Most Western and Northern

European countries, including France, Spain, Switzerland, and Sweden, reported the lowest prevalence (below 8%), while Eastern and Southeastern European countries, such as Romania, Turkey, and Uzbekistan, exhibited substantially higher rates (over 15%). The prevalence of diabetes in Ukraine was 11.51%, which is consistent with the regional average. The regional differences may reflect variations in socioeconomic status, lifestyle, access to healthcare, and genetic predisposition among populations. The map in Fig. 2 visually depicts these regional disparities, highlighting areas with both the lowest and highest diabetes burden [9].

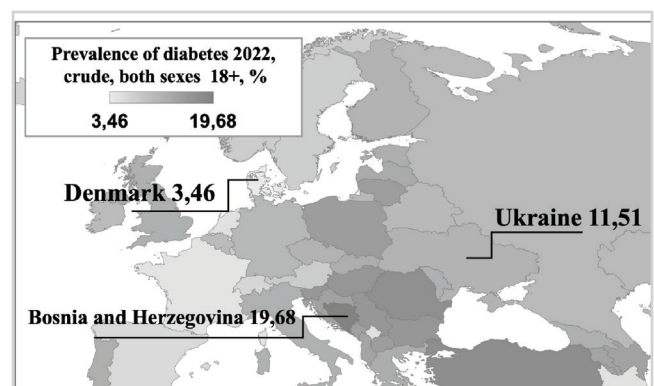


Fig. 2. Map of prevalence of T2D (in %) in Europe 2022. Indicators: crude data for all populations, both sexes, 18+ years. The map is based on data from WHO [9]. Highlighted are countries with the highest and lowest prevalence in Europe, as well as Ukraine.

To analyze trends in diabetes incidence over time, data from the past ten years were examined for several European countries, with an emphasis on Slavic-nationality countries (**Table 1**) that share similar phenotypic characteristics, mentality, and dietary habits [15,16].

Analysis of age-standardized diabetes prevalence rates per 100,000 population across six Central and Eastern European countries reveals a consistent upward trajectory from 2013 to 2022, reflecting broader epidemiological shifts in non-communicable diseases. Average diabetes rates in selected regions rose from 6,034 cases per 100,000 in 2013 to 8,078 in 2022, representing an increase of approximately 34% (**Table 1, Fig. 3**).

All seven countries showed a steady increase in diabetes incidence over the last decade, with Croatia showing the steepest rise (+45.5%), the Czech Republic following closely behind (36.3%), and Ukraine the slowest (+24.2%) (Fig. 3).

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Table 1. Diabetes prevalence in Slavic-nationality countries (per 100,000) from 2013 to 2022

Location	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Ukraine	3583	3629	3691	3788	3911	4046	4178	4285	4360	4449
Slovakia	4382	4512	4650	4803	4976	5154	5331	5490	5620	5753
Slovenia	5796	5975	6144	6299	6454	6604	6758	6921	7236	7656
Czechia	6074	6345	6604	6849	7100	7342	7580	7807	8016	8279
Croatia	7579	8003	8401	8750	9101	9448	9796	10165	10556	11028
Poland	8788	9077	9357	9616	9892	10164	10440	10714	10974	11303
Regional average	6034	6257	6475	6684	6906	7126	7347	7564	7794	8078

Note. Data from IHME. Global Burden of Disease Study, 2023 [17].

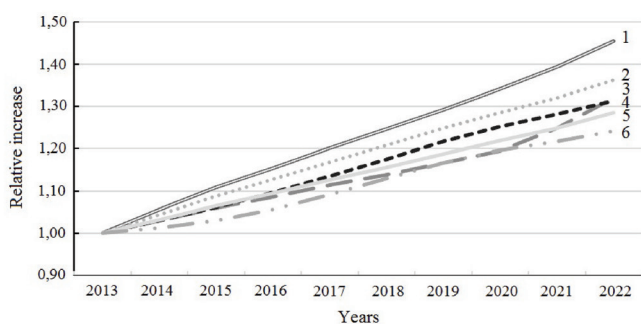


Fig. 3. Relative increase in diabetes incidence from 2013 to 2022. Data on the number of cases of diabetes were standardized per 100,000 population. Age-standardized prevalence of diabetes in selected Central and Eastern European countries, 2013-2022, indexed to 2013 levels (= 1.00). Data source: IHME, Global Burden of Disease Study 2023 [17].

Note. 1 – Croatia, 2 – Czechia, 3 – Slovenia, 4 – Slovakia, 5 – Poland, 6 – Ukraine.

Among the analyzed countries, a high incidence rate, which rose from 8,788 to 11,303 cases per 100,000 population (an increase of 28.6%), while its neighbor, Ukraine, maintained the lowest rates, which rose from 3,583 to 4,449 (an increase of 24.2%).

The increase in age-standardized prevalence of diabetes in Central and Eastern European countries can be explained by a combination of demographic, behavioral, and socioeconomic factors, such as lifestyle changes (physical inactivity, «westernization» of diet, *etc.*) [7, 18-20]. Regarding demographic factors, population aging is a key driver, as T2D is significantly more prevalent in older age groups. In Central and Eastern Europe, the actual age structure of the population is older than the standard age structure, resulting in a higher total prevalence compared to the age-standardized prevalence [9]. Although the population in Ukraine is declining, the aging effect prevails over the incidence of T2D [14].

As in European countries, in Ukraine, the main contributors to the increase in T2D are a high body mass index (population attributable fraction (PAF) is ~60%) and dietary risks (PAF is ~35%), including low fruit/vegetable consumption, excessive calorie intake, and a sedentary lifestyle. The region is experiencing «westernization» of diets and urbanization, which exacerbates obesity [20]. Additionally, the fastest growth in Croatia (+45.5%) and Poland may be linked to lower socio-demographic indices and healthcare quality compared to Western Europe, where growth rates are slowing down. Improvements in diagnosis and patient survival also may contribute to the apparent increase in T2D prevalence. Targeted interventions to prevent obesity and promote healthy eating are needed to curb the trend [1, 10, 17, 21].

In Ukraine, the lowest growth rate (+24.2%) can be partly explained by lower diagnostic rates and demographic losses [18]. Official IHME data [1], showing the lowest prevalence of T2D in Ukraine among countries in the region (4,449 per 100,000 in 2022), may be significantly underestimated due to high levels of underdiagnosis (65% cases of underdiagnosis according to Kyiv School of Economics estimates, 2020) [22]. Taking this factor into account, the actual prevalence increases to ~7,400 per 100,000, which even out differences between countries and indicates a hidden epidemic of T2D in Ukraine. This can explain why Ukraine appears to be the «calmest» country on the chart (Fig. 3), but in reality, this could be an artifact of low T2D detection rates rather than a true indication of epidemiological well-being.

The distribution of type 2 diabetes in different regions of Ukraine

We analyzed data on the prevalence of T2D in various regions of Ukraine from 2013 to 2017.

Between 2013 and 2017, the incidence of T2D in Ukraine increased overall, accompanied by marked regional variation (**Fig. 4**). At the national level, T2D incidence rose from 2,833 in 2013 to 3,071 in 2017, corresponding to an 8% increase over the study period (**Table 2**). Most regions showed a gradual, consistent increase in T2D incidence over the five-year period.

The largest relative increases were observed in Zhytomyr (+25%), Kherson (+19%), Ivano-Frankivsk and Volyn (each +18%), Rivne (+17%), Kirovohrad

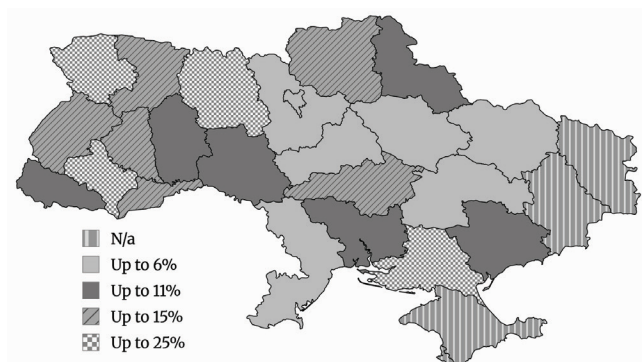


Fig. 4. Graphical representation of the increase in the prevalence of T2D by region in Ukraine. Data are presented as % changes from 2013 to 2017

(+16%), and Lviv (+15%). These regions are predominantly characterized by a higher proportion of rural population (**Table 2**). A moderate rise in incidence (10-14%) was recorded in Vinnytsia and Mykolaiv (each +13%), Ternopil, Chernivtsi, and Chernihiv (each +14%), as well as Sumy, Zakarpattia, and Zaporizhzhia (each +11%), and Khmelnytskyi (+9%). In contrast, lower growth rates ($\leq 6\%$) were observed in more urbanized and industrial regions, including Kyiv and Kyiv region (+5%), Odesa (+3%), Poltava, Cherkasy, and Kharkiv (each +6%). Dnipropetrovsk region was the only region showing a net decrease in T2D incidence, with a 12% reduction between 2013 and 2017. A sharp decline was observed in 2014, followed by a gradual but incomplete recovery in subsequent years.

Administrative changes to registration or migration outflows after 2014 could be a possible reason for these changes. It is also worth noting that regions with high rates of diabetes in 2013 (Cherkasy, Chernivtsi, Khmelnytskyi, and Ternopil) showed moderate growth in these cases in 2017, while regions with low rates of diabetes in 2013 (Rivne, Lviv, Ivano-Frankivsk, Zhytomyr) showed

Table 2. Trends in the incidence of type 2 diabetes in Ukraine, 2013-2017, number of cases standardized per 100,000 population

Region	Year					% changes in 2017, compared with 2013	% rural population, 2017
	2013	2014	2015	2016	2017		
Dnipropetrovsk	3285	2655	2747	2803	2882	-12%	16,3
Odesa	2957	2999	3050	3067	3057	3%	33
Kyiv	2908	2941	2957	2971	3046	5%	13,68
Poltava	2940	2945	3019	3084	3128	6%	38
Cherkasy	3525	3603	3628	3726	3753	6%	43,4
Kharkiv	2903	2921	2964	2985	3087	6%	19
Khmelnytskyi	3720	3837	3952	3958	4053	9%	42,5
Sumy	2936	3038	3065	3173	3267	11%	31,4
Zakarpattia	2666	2766	2840	2891	2948	11%	62,9
Zaporizhzhia	2681	2712	2824	2881	2975	11%	23,2
Vinnytsia	2696	2815	2947	3024	3058	13%	49,5
Mykolaiv	2652	2715	2811	2898	3004	13%	31,6
Ternopil	3267	3426	3535	3661	3731	14%	55,7
Chernivtsi	3666	3788	3941	4017	4188	14%	57
Chernihiv	2183	2274	2351	2414	2484	14%	34,6
Lviv	2064	2085	2196	2277	2377	15%	39,1
Kirovohrad	2290	2384	2522	2586	2665	16%	36,8
Rivne	2731	2926	3047	3080	3195	17%	51,3
Ivano-Frankivsk	2769	2931	3077	3228	3279	18%	56,1
Volyn	2094	2210	2302	2372	2467	18%	34,9
Kherson	2351	2555	2638	2702	2800	19%	39,1
Zhytomyr	2621	2820	2989	3147	3275	25%	40,6
Ukraine total	2833	2852	2933	2994	3071	8%	30,7

Note. % changes – comparison of 2017 data with 2013 data. Cells reflect the relative incidence of type 2 diabetes (cases per 100,000 population) within each year.

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higher growth rates over 2013-2017. Thus, there is no clear geographical pattern in the prevalence of T2D across Ukraine's regions; it is scattered across the map (Fig. 4), but some western regions show a greater increase.

The observed increase in T2D incidence in Ukraine between 2013 and 2017, together with pronounced regional heterogeneity, may be partially explained by differences in demographic structure, particularly the proportion of rural population, as well as by a combination of socioeconomic, healthcare-related, and epidemiological factors. Regions with a higher share of rural population, such as Zakarpattia, Chernivtsi, Ternopil, Ivano-Frankivsk, Rivne, Vinnytsia, and Zhytomyr, demonstrated higher relative growth in T2D incidence during the study period (Table 2).

To identify the relationship between the rural-urban population and T2D prevalence, we conducted a correlation analysis using 2017 data. Rural-urban disparities frequently obscure distinctive metabolic profiles; consequently, analyses along this dimension may uncover patterns that remain undetectable at the aggregate national scale [23]. Through a correlation analysis, we detected that regions with a higher proportion of rural population have a significantly greater increase in the registered prevalence of diabetes (Fig. 5). In general, we found a moderate direct correlation between the rural population levels in regions and the percentage of incidence of T2D in these regions, with Pearson's correlation coefficient $r=0.485$. If we exclude the Dnipropetrovsk region, the only region that demonstrated a decrease in T2D prevalence, Pearson's correlation coefficient increased to ~ 0.65 .

In general, we can conclude that the predominance of the rural population in the overall regional structure is associated with a higher incidence of T2D. At the same time, a higher level of urbanization is associated with fewer registered cases of T2D in Ukrainian regions. Several mechanisms may underlie this association. First, the increase in T2D prevalence in regions with a high proportion of rural population may indicate improved case detection rather than a real increase in incidence.

Rural populations often experience limited access to preventive healthcare services, including regular screening for metabolic disorders. Improvements in primary healthcare coverage or diagnostic activity during the study period may therefore lead to a delayed but accelerated detection of previous-

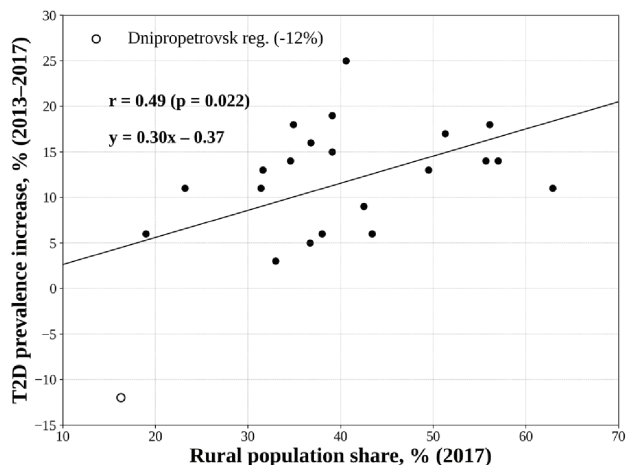


Fig. 5. Relationship between the fraction of rural population and the relative increase in age-standardized prevalence of T2D in Ukrainian regions during 2013–2017 ($n = 22$). Each point represents one administrative region. Linear regression line: $y = 0.36x - 2.14$ Pearson's correlation coefficient $r = 0.485$.

ly undiagnosed T2D cases, resulting in a steeper apparent increase in incidence [6]. Second, rural residents in Ukraine have a higher average age due to out-migration of younger individuals to urban centers or abroad, and aging is a well-established risk factor for T2D [24]. Third, although rural lifestyles are traditionally associated with higher physical activity, ongoing lifestyle transitions, including reduced occupational physical activity, increased consumption of calorie-dense processed foods, and persistent socioeconomic stress, may contribute to rising metabolic risk in these populations [7, 25]. Recent results of the national study on the health index confirm that the increased prevalence of T2D correlates with higher obesity rates and an aging population in different regions of Ukraine [6].

In Ukraine, higher T2D incidence in rural-dominant regions like Ivano-Frankivsk is due to risk factors such as obesity, poor diet quality, aging populations, stress, and limited access to preventive care, whereas urban areas show lower registered cases due to better healthcare infrastructure, screening, and detection biases. Lower levels of urbanization may lead to fewer registered cases, as rural residents often miss examinations, have limited access to medical facilities, and have insufficient access to antidiabetic drugs, leading to underestimation of statistics despite potentially higher actual prevalence of the disease [26].

Rural areas exhibit elevated T2D rates not so much because of a sedentary lifestyle, but because

of nutritional imbalance, reduced health literacy, and a passive attitude towards health monitoring, which exacerbate the obesity- and metabolic-related problems. Studies note that rural passivity in preventive exams and weak doctor-patient-pharmacist linkages contribute to a higher incidence amid funding shortages in rural health systems [27]. Higher urbanization is associated with fewer registered T2D cases, driven by better access to endocrinologists, glucose monitoring, and lifestyle interventions such as diet adherence and physical activity, which better control disease progression in cities. World Bank analyses of Ukrainian regions (e.g., Lviv vs. Poltava) highlight urban-rural disparities in care cascades, with urban settings enabling earlier detection and management [28].

Situation with T2D prevalence in western Ukrainian regions

Several western Ukrainian regions (Ivano-Frankivsk, Ternopil, and Chernivtsi regions) with closely similar proportions of rural population were examined in detail. All regions demonstrate a consistent increase in T2D prevalence ($R^2 > 0.98$ in linear regression, indicating a stable trend) (Fig. 6), exceeding the average increase in Ukraine.

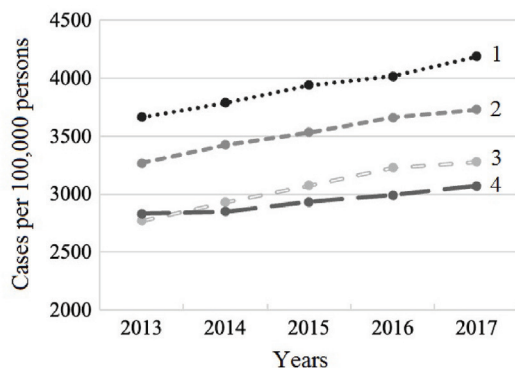


Fig. 6. Increase in T2D incidence from 2013 to 2017 in selected western regions of Ukraine. Cases per 100,000 population for 18+ year-olds. Note. 1 – Chernivtsi, 2 – Ternopil, 3 – Ivano-Frankivsk, 4 – Ukraine total.

The fastest growth from 2013 to 2017 was observed in the Ivano-Frankivsk region (+4.3% per year). In 2013, the Ivano-Frankivsk region had fewer people with T2D than the national average, but eventually caught up (+6.8% in 2017) due to its rapid growth. The Chernivtsi region demonstrates the highest relative prevalence: 36.4% above the national level in 2017 and the highest among all regions. The Ternopil region remains consistently 15-21% above the national average level.

In the analyzed regions, 55-57% of the population are rural residents, while nationwide their proportion is only 30.7%. This represents a 1.8 times higher proportion of the rural population in western regions, corresponding to a 1.2-1.4 times higher prevalence of T2D than the national average. Overall, among these three regions, the Chernivtsi region has the highest prevalence of T2D (4,188 per 100,000), with 57% of patients residing in rural areas, and is entering a critical risk zone. A recent rapid increase in the prevalence of T2D in western regions of Ukraine may be due to several factors. These regions are characterized by a high proportion of rural populations (over 55%), and this rural demographic correlates strongly with steeper growth in registered diabetes cases. The observed increase may partly be attributed to improved case detection driven by better healthcare access and enhanced registration practices in rural communities. In addition, the acceleration of T2D prevalence in western Ukrainian regions can be also linked to population aging, rising obesity rates, and transitions to more sedentary lifestyles and energy-dense diets [7].

Although the absolute prevalence started below the national average, such regions have since caught up, with Ivano-Frankivsk showing one of the fastest growth rates among all Ukrainian regions. According to state statistical data [11], an increase in T2D prevalence in the Ivano-Frankivsk region: +659 cases per 100,000 over 5 years (+17.3% among adults) is faster than the national rate (+8%), possibly due to population ageing (the share of people aged ≥ 65 increased by 1.5%). A stable incidence rate from 2013 to 2017 (prevalence growth rate) of around 400 per 100,000 is good, but new cases among those aged 40–59 should be closely monitored. The prevalence of T2D among older adults (men 60+, women 55+) decreased from 60% to 57% of cases, while the number of new cases decreased by 6%, suggesting a gradual «rejuvenation» of the disease. The total prevalence of T2D is 35% in men and 65% in women; among new cases, the pattern is similar. A 94% dispensary (registered and regularly monitored) coverage rate for patients with T2D in the Ivano-Frankivsk region indicates a very high level of inclusion of diagnosed patients in systematic medical supervision and follow-up care. This means that nearly all individuals identified with T2D are registered in the healthcare system and receive regular clinical assessment, laboratory testing, prescription management, and monitoring for complications.

Conclusions

1. Age-standardized type 2 diabetes prevalence has risen steadily across Central and Eastern Europe, increasing by about one-third since 2013.

2. Ukraine appears to have the lowest burden, according to official data, but this is largely due to substantial underdiagnosis. Adjusted estimates place Ukraine's true prevalence close to regional levels, revealing a largely hidden epidemic shaped by modifiable risk factors.

3. Within Ukraine, regional patterns from 2013-2017 show that less urbanized western regions experienced the fastest recorded increases, likely reflecting improved detection rather than rapidly rising incidence, which remained stable nationwide. High baseline rates in central and eastern regions indicate longstanding cardiometabolic risk. Ivano-Frankivsk illustrates these trends, with rising prevalence but stable incidence and strong follow-up coverage, signaling effective secondary care but growing future risk.

4. Overall, Ukraine's seemingly favorable type 2 diabetes profile is misleading. These data highlight the need for targeted public health interventions, focusing on obesity prevention, early screening, and continued improvement of rural healthcare infrastructure. Addressing risk factors and regional disparities is essential for managing the diabetes epidemic in western Ukraine. Strengthening screening, preventive public health measures, and surveillance systems is essential to curb further escalation.

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Abbreviations

T2D – type 2 diabetes

IHME – Institute for Health Metrics and Evaluation

WHO – World Health Organization

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ПОШИРЕНІСТЬ ЦУКРОВОГО ДІАБЕТУ 2-ГО ТИПУ В УКРАЇНІ: РЕГІОНАЛЬНІ ОСОБЛИВОСТІ ТА ТЕНДЕНЦІЇ ЗРОСТАННЯ НА ОСНОВІ ДАНИХ ЗА 2013–2022 РОКИ

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Резюме. Цукровий діабет 2-го типу (ЦД2) є однією з провідних неінфекційних пандемій. В Україні офіційно зареєстрована поширеність залишається нижчою, ніж у більшості країн Центральної та Східної Європи, проте значна недодіагностика може приховувати справжню епідеміологічну ситуацію. **Мета.** Оцінити динаміку поширеності ЦД2 в Україні та сусідніх країнах у 2013-2022 роках та визначити регіональні відмінності в Україні (2013-2017 роки).

Матеріал і методи. Використано відкриті дані ВООЗ, IHME (GBD), Центру громадського здоров'я Міністерства охорони здоров'я України та Державної служби статистики України. Розраховано стандартизовану за віком поширеність та захворюваність на 100 000 населення, проведено кореляційний та регресійний аналізи.

Результати. У 2022 році стандартизована за віком поширеність ЦД2 в Україні становила 4449 на 100 000 населення (зростання на 24,2% з 2013 року), що є найнижчим показником серед шести країн Центральної та Східної Європи: України, Словаччини, Словенії, Чехії, Хорватії та Польщі (регіональний середній показник становить 34%). З урахуванням недодіагностики справжня поширеність може досягати ~7400 на 100 000. Протягом 2013-2017 рр. найвища

базова поширеність була зафіксована в Чернівецькій, Хмельницькій та Черкаській областях, тоді як найшвидше зростання відбувалося в переважно сільських західних регіонах (обернена кореляція з рівнем урбанізації, $r=0,49$). **Висновки.** Офіційно низька поширеність ЦД2 в Україні є значною мірою наслідком недодіагностики. Найшвидше зростання зареєстровано в сільських західних регіонах, що може бути пов'язано з поліпшенням виявлення випадків захворювання та старінням населення. Високий рівень диспансерного спостереження в Івано-Франківській області свідчить про ефективну організацію медичної допомоги, проте стабільна захворюваність та накопичення хронічних випадків вимагають посилення первинної профілактики ожиріння та раннього скринінгу.

Ключові слова: цукровий діабет 2-го типу, поширеність, регіональні відмінності, Україна, Івано-Франківська область, старіння.

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