



# EUROMAP OF UKRAINE: HEALTH CARE





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## INTRODUCTION

Over the course of recent weeks, a significant number of materials has been published on the response to the coronavirus pandemic, the rescue of national economies and the socio-economic consequences of the crisis. At the same time, such pandemics may well recur, so heated discussions have begun about the health care systems and cooperation in this area. Today, there is no unified model of health care in the European Union or vision of which health care system (HCS) is the best. The New Europe Center has prepared a policy brief on this issue<sup>1</sup>. This area is the prerogative of the EU Member States, but the COVID-19 pandemic has sparked active debates on strengthening the EU's competence in the field of health care.

A petition, signed by more than 6,000 Europeans, including former prime ministers, the President of the European Parliament, representatives of influential think tanks, calls to make health care and epidemic response shared competences of the EU under the ordinary legislative procedure and to give the Commission emergency powers to coordinate epidemic response measures, as a federal government should do<sup>2</sup>. Among the signatories of this document are Romano Prodi, former President of the European Commission and Prime Minister of Italy; Enrique Barón Crespo, former President of the European Parliament; Hans Eichel, former Minister of Finance of Germany and others.

At the same time, medical reform, which should lead to a qualitative transformation of the domestic health care system, has been launched in Ukraine only in 2017. That is why the New Europe Center decided to investigate how significant is the discrepancy between the health care indicators of Ukraine and the EU Member States.

"Euromap of Ukraine: Health Care" is a part of a larger study by the New Europe Center, "The European Map of Ukraine. Rating of

European Integration of Regions," prepared in cooperation with the Government Office for Coordination of European and Euro-Atlantic Integration and compiled on the basis of indicators that, in our opinion, most clearly reflect the dynamics of the rapprochement of individual regions with the EU. The second part of "The European Map of Ukraine" should be released in autumn 2020 (the first issue has been presented in November 2019)<sup>3</sup>.

For the "Euromap of Ukraine: Health Care" we analyzed 23 health care indicators. They are partially based on a methodology of «The State of Health in the EU» country profiles developed by the Organization for Economic Cooperation and Development (OECD) and the European Observatory on Health Systems and Policies in collaboration with the European Commission. Among the evaluation categories are the following ones:

- Health status,
- Risk factors,
- Health system,
- Effectiveness, accessibility, and resilience of the health system.

However, numerous indicators were not included in this analysis due to the differences in statistics available for calculation in the EU and Ukraine. Moreover, it should be taken into account that medical reform is still underway in Ukraine, so many elements of HCS or medical standards present in the EU countries do not yet exist or are not measured in Ukraine. The list of selected indicators does not claim to be exhaustive, but even this sample review of indicators shows a long distance between the EU and Ukraine. At the same time, certain countries of the European Union are sometimes quite critical of the current state of health care.

<sup>1</sup> *Coronavirus and unity in the EU: how the pandemic will affect the integration of the Union*, [http://neweurope.org.ua/wp-content/uploads/2020/04/PB\\_Coronavirus\\_eng.pdf](http://neweurope.org.ua/wp-content/uploads/2020/04/PB_Coronavirus_eng.pdf)

<sup>2</sup> *A European answer to the coronavirus threat to prove that the EU is a true community with a shared future*, <https://www.cesue.eu/en/appeal>

<sup>3</sup> *The Euromap: profiles of regions*, <http://neweurope.org.ua/en/project/yevromapa-profil-regioniv/>

The selected indicators were evaluated at 10 points by proportional rating method, from the best result of a certain region to the worst using the appropriate step. The maximum total score that the regions could get was 230. A detailed description of the calculations is given next to the table for each indicator. The purpose of the analysis, of course, is not to promote competition between regions for the best performance in the health care sector, as most indicators depend on government decisions. Our main objective is to draw attention to the importance of the medical reform in Ukraine in general, and to the need to analyze best practices in the European Union so that they could be adopted in our country.

Ivano-Frankivsk, Ternopil, Kyrovohrad regions are the leaders of this rating. Odesa, Luhansk, and Donetsk regions scored the least points.

At the same time, it should be noted that Donetsk and Luhansk regions occupy the lowest positions due to the impossibility to take into account data from the temporarily occupied territories and as a consequence the lack of data on some indicators. In addition, data from the State Statistics Service on the total population of these regions were used to calculate certain indicators.

## LIST OF INDICATORS

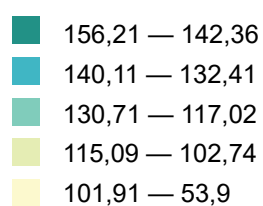
- 1 Average life expectancy at birth in 2018
- 2 Difference in the average life expectancy of men and women at birth in 2018
- 3 Average life expectancy at the age of 65 in 2018
- 4 Difference in the average life expectancy of men and women at the age of 65 in 2018
- 5 Number of doctors in treatment and prevention institutions (excluding dentists, training and research facilities employees, management staff) per 1 thousand population (as of December 31, 2019)
- 6 Number of paramedical staff per 1 thousand population (as of December 31, 2019)
- 7 Number of general practitioners/family doctors per 1 thousand population (as of December 31, 2019)
- 8 Number of beds (actually deployed + phased out for repairs) in hospitals per 1 thousand population (as of December 31, 2019)
- 9 Number of visits to doctors (excluding dentists) in clinics per 1 thousand population (as of December 31, 2019)
- 10 Percentage of planned vaccinations in 2019 (DTP3 up to one year, Hepatitis B up to one year, DT (adults), MMR (1year))
- 11 Number of persons who underwent a medical examination or a test in medical institutions of the region during the last 12 months, % ("Health Index. Ukraine", 2019)
- 12 Attitudes towards vaccination (% of those who are aware of the health of their children) ("Health Index. Ukraine", 2019)
- 13 Percentage of those who had experience of refusing vaccinations for a child ("Health Index. Ukraine", 2019)
- 14 Number of persons forced to refuse outpatient treatment due to lack of funds during the year before the survey, % ("Health Index. Ukraine", 2019)
- 15 Number of persons who are satisfied with the medical care provided by district/family doctors, % ("Health Index. Ukraine", 2019)
- 16 Percentage of those who consulted a doctor during an illness that occurred during the last 12 months ("Health Index. Ukraine", 2019)
- 17 Percentage of signed declarations on the provision of primary health care from the total population of the region (as of May 2020)
- 18 Mortality rate from traffic accidents per 100 thousand population (data for 2018)
- 19 Mortality rate from circulatory system diseases per 100 thousand population (data for 2018)
- 20 Mortality rate from tumors per 100 thousand population (data for 2018)

## CHAPTER

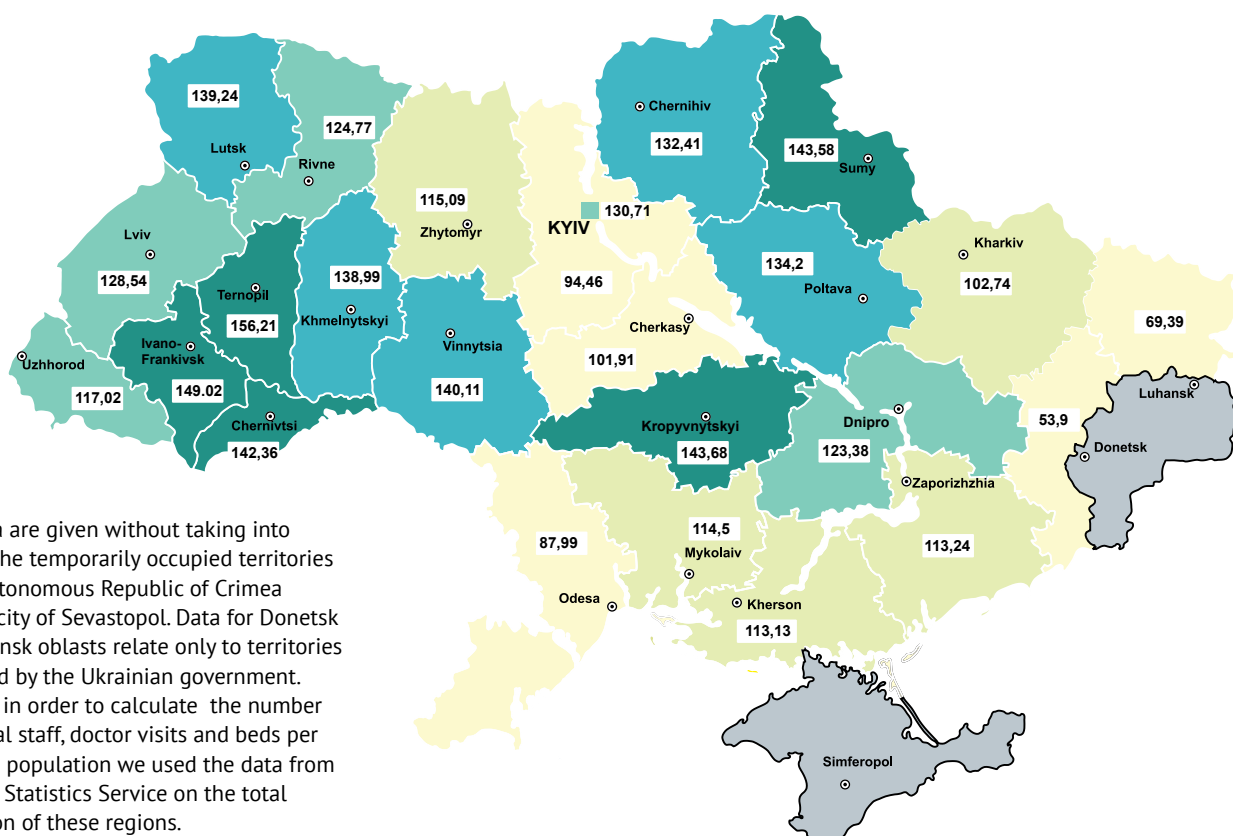
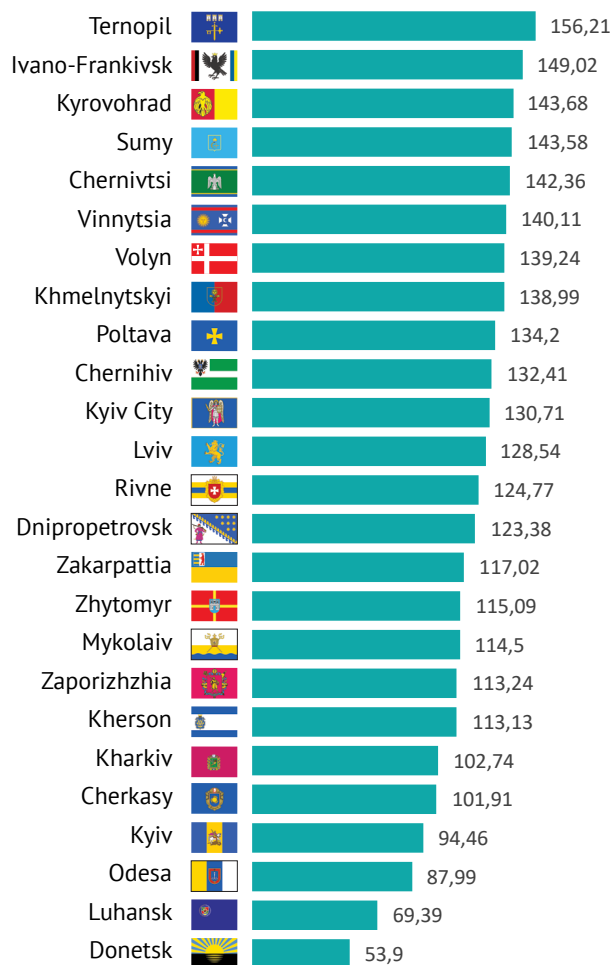
## 3

EUROMAP OF UKRAINE:  
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## OVERALL RATING



230



\*The data are given without taking into account the temporarily occupied territories of the Autonomous Republic of Crimea and the city of Sevastopol. Data for Donetsk and Luhansk oblasts relate only to territories controlled by the Ukrainian government. However, in order to calculate the number of medical staff, doctor visits and beds per thousand population we used the data from the State Statistics Service on the total population of these regions.

## HEALTH STATUS

Average life expectancy at birth is the most integrated indicator of health, living and working conditions. According to 2018 data, in Ukraine this figure was 71,76 years. 66,9 among men and 76.72 among women. The difference in life expectancy between men and women is 9,82<sup>4</sup>. Among the leaders are the city of Kyiv and the Western regions of Ukraine.

A slowdown in life expectancy increase can be considered a common trend in the EU, but the average life expectancy at birth in the EU is 80,9 years (data for 2017). The difference in life expectancy between men and women is 5,2<sup>5</sup>. Accordingly, life expectancy in Ukraine is much lower than in the European Union (moreover, in Ukraine, the average difference in life expectancy between men and women is almost twice as high).

The average life expectancy at the age of 65+, according to 2018 data, is 15,14 years in Ukraine, 12,61 among men and 16,85 among women. The city of Kyiv and the Western regions of Ukraine are in the lead. At the same time, in the EU, the average life expectancy at the age of 65 + is 19,9 (data for 2017).

The vaccination rate is no less important. For instance, with the incidence of diseases decreasing, EU citizens have doubts about the need for immunization. Therefore, the Member States cooperate closely in this area. Ukraine, in turn, also needs to promote vaccination more actively, as we don't achieve European targets in most routine vaccinations, although our results are improving.

According to 2019 data, the percentage of planned vaccinations against pertussis, diphtheria, and tetanus (DTP3) up to one year is 80,5% in Ukraine. In the EU, the respective figure is 94%. The leader among the regions is Mykolaiv region (100%)<sup>6</sup>.

If we take the rate of vaccination against measles, mumps, and rubella (MMR, 1 year), it is 93, 2% in Ukraine, while in the EU this indicator (only for measles) is 94%. Moreover, 42 of 53 European countries have managed to stop the spread of measles. The leader among the regions in terms of MMR (1 year) vaccination is Mykolaiv region (100%). At the same time, the rate of hepatitis B3 vaccination up to one year is 77% in

Ukraine and 93% in the EU. The leader among the regions is Poltava region (93,7%)<sup>7</sup>.

The same applies to the percentage of routine vaccinations of adult residents of the regions. For example, the leaders in this category are Zaporizhzhia, Poltava, and Lviv regions with more than 96% of the population covered by the planned vaccinations. At the same time, in the Luhansk region the respective figure is only 30,4%<sup>8</sup>.

It is important to note that Luhansk region is in top ten in terms of certain planned vaccinations, which is a significant result, given the security and humanitarian situation in this region.

The percentage of those who have experienced the refusal of vaccinations for children, according to the study "Health Index. Ukraine," is also indicative in this case. The overall rate for Ukraine in 2019 is 18,3%, while in 2018 it was 21,9%. The worst results in 2019 were in Ivano-Frankivsk (31,6%), Lviv (30,1%), and Ternopil (29,4%) regions<sup>9</sup>.

In contrast to Ukraine, the European Union also measures the percentage of persons aged 65+ who have been vaccinated against influenza. As of 2019, none of the EU countries has reached the WHO target of 75% for influenza vaccination coverage among the elderly people. The average coverage in the EU is 43%<sup>10</sup>. Obviously, in Ukraine it will be much lower.

## RISK FACTORS

Despite its limited competence in the field of health care, the European Union has long recognized the impact of noncommunicable diseases on the EU economy and the well-being of its citizens. On top of that, the EU can act in the health care field by drafting laws based on the impact of the four freedoms of the single market. For instance, all harmonization measures adopted for the single market must ensure a high level of health care. Relevant secondary legislation has already been approved, for example, on such issues as tobacco production and advertising, pharmaceutical legislation, etc.

4 *Population of Ukraine in 2018, demographic yearbook*, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

5 *Eurostat*, [https://ec.europa.eu/eurostat/web/health/data/database?p\\_p\\_id=NavTreeportletprod\\_WAR\\_NavTreeportletprod\\_INSTANCE\\_HBRnpDQkQkPD&p\\_p\\_lifecycle=0&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-2&p\\_p\\_col\\_count=1](https://ec.europa.eu/eurostat/web/health/data/database?p_p_id=NavTreeportletprod_WAR_NavTreeportletprod_INSTANCE_HBRnpDQkQkPD&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1)

6 *Vaccination coverage*, <https://phc.org.ua/kontrol-zakhvoryuvan/imunizaciya/okhoplennya-sheplennyami>

7 *Data calculated for third doses for diphtheria, tetanus, pertussis, and hepatitis B, and for first doses for measles*.

8 *Vaccination coverage*, <https://phc.org.ua/kontrol-zakhvoryuvan/imunizaciya/okhoplennya-sheplennyami>

9 *Health Index. Ukraine*, <http://health-index.com.ua>

10 *Eurostat*, [https://ec.europa.eu/eurostat/web/health/data/database?p\\_p\\_id=NavTreeportletprod\\_WAR\\_NavTreeportletprod\\_INSTANCE\\_HBRnpDQkQkPD&p\\_p\\_lifecycle=0&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-2&p\\_p\\_col\\_count=1](https://ec.europa.eu/eurostat/web/health/data/database?p_p_id=NavTreeportletprod_WAR_NavTreeportletprod_INSTANCE_HBRnpDQkQkPD&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1)



Meanwhile, in Ukraine, the mortality rate from noncommunicable diseases is one of the highest in the WHO European region. These diseases accounted for 91% of all deaths in 2017. Deaths from five of them (cardiovascular diseases, diabetes, cancer, chronic respiratory diseases, and mental health) account for almost 84% of all deaths in Ukraine<sup>11</sup>. And behavioral factors (tobacco and alcohol consumption, unhealthy diet, or lack of physical activity) are among the main causes of the development of these diseases. For example, around 790,000 EU citizens die prematurely every year from smoking, alcohol consumption, unhealthy diets, and lack of physical activity<sup>12</sup>.

It is worth noting that in Ukraine, data on people who drink alcohol, smoke, are overweight, etc. are not collected on a regular basis. Only in summer 2019, Ukraine launched a STEPS study for the first time, which shows the prevalence of noncommunicable diseases and their risk factors. In the EU countries, it is conducted every few years. However, the results of this study in Ukraine have not yet been published.

The “Tobacco Control Scale” report, which tracks the implementation of tobacco control policies at European level, ranks Ukraine 20th out of 36 countries, with a score of 50 out of a possible 100 points<sup>13</sup>. According to the results of the Global Adult Tobacco Survey 2017, in Ukraine, 39,7% of adult men and 8,8% of adult women smoked every day<sup>14</sup>. The national level of tobacco consumption in Ukraine decreased from 28,4% in 2010 to 22,8% in 2017<sup>15</sup>. At the same time, in the EU, the respective overall figure was 19,2% in 2017<sup>16</sup>.

Therefore, Ukraine “fits” into the general EU trend in terms of the level of tobacco addiction. However, we should not forget that this is an average indicator. For example, in Sweden it is 10%, i.e. there are twice less smokers in this country than in

Ukraine<sup>17</sup>. The worst situation among the EU countries is in Bulgaria (27%), Greece (27%). In France, Poland, Romania the number of daily smokers is about the same as in Ukraine.

Cigarette smoking is the most common way of smoking among adolescents and young people. Since 2016, alternative ways of consuming tobacco (electronic cigarettes) have been spreading in Ukraine. However, this area is not sufficiently regulated at the legislative level. According to the Global Youth Tobacco Survey 2017, 13,5% of adolescents aged 13-15 smoked in Ukraine every day<sup>18</sup>.

Furthermore, not all indicators of tobacco consumption are measured in Ukraine, such as smoking during pregnancy. Reducing tobacco consumption in Ukraine also requires an appropriate level of coordination between the Government and its agencies, and the division of responsibilities between national, regional, and local authorities. There is no such comprehensive national network in Ukraine yet<sup>19</sup>.

Regarding alcohol consumption, according to the survey conducted by the Rating Group, as of January 2017, 2% of respondents aged 18+ consumed alcoholic beverages (including low-alcohol beverages) almost daily, 12% several times a week, 36% several times a month, 34% several times a year, and 16% did not drink alcohol at all<sup>20</sup>. Most of those who admitted to drinking alcohol at least a few times a month were residents of the Central regions of the country, and the smallest share of them reside in the West. At the same time 23,2% of the EU citizens consumed alcoholic beverages every month in 2014.

The National Action Plan on noncommunicable Diseases, which Ukraine has approved in the context of the health care reform, also envisages a 25% reduction in traffic accident deaths<sup>21</sup>. In 2019, there were 160,000 road accidents in the country, as a result of which 32,000 people were injured and

<sup>11</sup> *Tackling noncommunicable diseases in Ukraine (2015 – 2019)*, <http://www.euro.who.int/en/countries/ukraine/publications/tackling-noncommunicable-diseases-in-ukraine-2015-2019-2020>

<sup>12</sup> *Health at glance, Europe 2018*, [https://ec.europa.eu/health/sites/health/files/state/docs/2018\\_healthatglance\\_rep\\_en.pdf](https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf)

<sup>13</sup> *Ibid.*

<sup>14</sup> *Global Youth Tobacco Survey*, <http://www.euro.who.int/en/countries/ukraine/publications/global-adult-tobacco-survey-ukraine-2017>

<sup>15</sup> *Tobacco control in Ukraine: Assessment of current status of tobacco control and opportunities for further development (2020)*, [http://www.euro.who.int/\\_data/assets/pdf\\_file/0011/439238/Tobacco-control-in-Ukraine-assessment.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0011/439238/Tobacco-control-in-Ukraine-assessment.pdf?ua=1)

<sup>16</sup> *Eurostat*, [https://ec.europa.eu/eurostat/web/health/data/database?p\\_p\\_id=NavTreeportletprod\\_WAR\\_NavTreeportletprod\\_INSTANCE\\_HBRnpDQkQkPD&p\\_p\\_lifecycle=0&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-2&p\\_p\\_col\\_count=1](https://ec.europa.eu/eurostat/web/health/data/database?p_p_id=NavTreeportletprod_WAR_NavTreeportletprod_INSTANCE_HBRnpDQkQkPD&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1)

<sup>17</sup> *State of health in the EU, Sweden*, <https://www.oecd-ilibrary.org/docserver/2dcb7ca6-en.pdf?expires=1590121940&id=id&accname=guest&checksum=68BF661535B627D41F310CA0AF39D4BC>

<sup>18</sup> *Global Youth Tobacco Survey*, <https://extranet.who.int/hcdsmicrodata/index.php/catalog/GYTS>

<sup>19</sup> *Tobacco control in Ukraine: Assessment of current status of tobacco control and opportunities for further development (2020)*, [http://www.euro.who.int/\\_data/assets/pdf\\_file/0011/439238/Tobacco-control-in-Ukraine-assessment.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0011/439238/Tobacco-control-in-Ukraine-assessment.pdf?ua=1)

<sup>20</sup> *Health and Well-Being of the Ukrainian Working Age Population*, [http://ratinggroup.ua/research/ukraine/zdorove\\_i\\_samochuvstvie\\_ukraincev.html](http://ratinggroup.ua/research/ukraine/zdorove_i_samochuvstvie_ukraincev.html)

<sup>21</sup> *The National Action Plan on Non-Communicable Diseases has been approved*, <https://moz.gov.ua/article/news/uhvaleno-nacionalnij-plan-zahodiv-schodo-neinfekcijnih-zahvorjuvan>

almost 3454 – died<sup>22</sup>. Due to road accidents, Ukraine's economy loses 2% of GDP per year<sup>23</sup>.

It is also interesting that the worst year in terms of the number of road accidents in Ukraine was 2007, when 9,574 people died in traffic accidents; later, this figure gradually decreased, and in 2017 3 432 people died. At the same time, the worst indicators of the number of deaths in road accidents among individual EU Member States in 2017 were as follows: 3,537 in Poland, 3,542 in Germany, and 3,772 in Italy. Thus, in Ukraine, in fact, the level of road accident mortality is virtually the same.

However, it should be noted that in Ukraine, there is a lack of statistics on road accidents caused by alcohol consumption, as well as differences in the calculation of the number of deaths in road accidents by different institutions. For example, a person who was hospitalized after some road accident and died within 30 days is not included in the statistics of the Patrol Police.

Regarding the number of deaths from traffic accidents per 100 thousand population, in Ukraine this figure is 10,5 (data for 2018, excluding Donetsk and Luhansk regions). The worst result among the regions is in Zhytomyr region (13,7)<sup>24</sup>. At the same time, the respective figure in the world in 2016 was 18,2, and in the WHO European Region it was 8,8<sup>25</sup>.

The lowest mortality rates were in such countries as Switzerland, Norway, and Sweden (slightly more than 2 people per 100,000), and the highest were in certain CIS countries (more than 15 people in Tajikistan, Kazakhstan, and Armenia)<sup>26</sup>. Overall, most European countries have a lower mortality rate than Ukraine. Although the indicators of Romania, Bulgaria, and Poland are only slightly better than the Ukrainian ones.

Regarding physical activity, Ukraine has developed a strategy "Physical Activity – Healthy Lifestyle – Healthy Nation" designed for the period up to 2025<sup>27</sup>. However, at the national level, in contrast to the Member States of the European Union, there are no statistics on the number of gym members, people who do sports regularly, the mileage of bicycle paths, etc.

However, among the provisions of the Association Agreement with the European Union, 17 regulations relate to the field of health care. And by signing the Agreement with the EU, Ukraine has committed to update national legislation, in particular, in the areas of promotion of healthy lifestyle, cancer and infectious diseases, circulatory system, human tissues, cells and organs, mental health (including drug addiction), injury prevention, combating smoking and alcohol consumption.

According to a survey conducted by the Rating Group, as of January 2017, 24% of Ukrainians do sports every day or several times a week<sup>28</sup>. At the same time, 40,2% of the EU citizens go in for sports at least once a week, as of 2014. In Denmark, Germany, Netherlands, Finland, Sweden, Slovenia it is more than 80% of citizens. Moreover, more than 50% of citizens (aged 65-74) exercise regularly in Denmark, Netherlands and Sweden, while more than 40% of citizens (aged 75+) in Denmark, Germany and Netherlands<sup>29</sup>.

## HEALTH SYSTEM

The average level of health care spending in the EU is 9,8% of GDP, as of 2017. It is 2,884 euros per capita. The highest level of health care expenditure relative to GDP in the European Union is over 10%, for example, in Germany (11,2% of GDP, 4,300 euros per capita) and Sweden (11% of GDP, 3,872 euros per capita). The lowest rate in the range of 5-7% of GDP<sup>30</sup>, for example, in Romania (5% of GDP, 1,029 euros per capita), Lithuania (6,5% of GDP, 1,605 euros per capita), and Latvia (6% of GDP, 1,213 euros per capita).

Ukraine spent 3,2% of GDP on the health care system in 2019, which is about UAH 2,641 per Ukrainian per year. It is also worth noting that the share of health care system expenditure in the state budget was 8,9%<sup>31</sup>.

Moreover, in the European Union, health care expenditures include at least three components: public funding, compulsory health insurance and compulsory medical bills, and voluntary health insurance.

<sup>22</sup> Patrol Police of Ukraine, <http://patrol.police.gov.ua/statystyka/>

<sup>23</sup> Almost 4 thousand people died last year in Ukraine in traffic accidents, [https://zaxid.net/v\\_ukrayini\\_minulogo\\_roku\\_v\\_dtp\\_zaginuli\\_mayzhe\\_4\\_tis\\_lyudey\\_n1496714](https://zaxid.net/v_ukrayini_minulogo_roku_v_dtp_zaginuli_mayzhe_4_tis_lyudey_n1496714)

<sup>24</sup> State Statistics Service of Ukraine, <http://www.ukrstat.gov.ua>

<sup>25</sup> European regional status report on road safety 2019, <http://www.euro.who.int/en/publications/abstracts/european-regional-status-report-on-road-safety-2019>

<sup>26</sup> Ibid.

<sup>27</sup> On the National Strategy for Physical Activity in Ukraine for the period up to 2025 "Physical Activity – Healthy Lifestyle – Healthy Nation", <https://zakon.rada.gov.ua/laws/show/42/2016>

<sup>28</sup> Health and Well-Being of the Ukrainian Working Age Population, [http://ratinggroup.ua/en/research/ukraine/zdorove\\_i\\_samochuvstvie\\_ukrainceiv.html](http://ratinggroup.ua/en/research/ukraine/zdorove_i_samochuvstvie_ukrainceiv.html)

<sup>29</sup> Eurostat, [https://ec.europa.eu/eurostat/web/health/data/database?p\\_id=NavTreeportletprod\\_WAR\\_NavTreeportletprod\\_INSTANCE\\_HBRnpDQkQkPD&p\\_p\\_lifecycle=0&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-2&p\\_p\\_col\\_count=1](https://ec.europa.eu/eurostat/web/health/data/database?p_id=NavTreeportletprod_WAR_NavTreeportletprod_INSTANCE_HBRnpDQkQkPD&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_count=1)

<sup>30</sup> State of Health in the EU, [https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu\\_25227041](https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu_25227041)

<sup>31</sup> Yearly report, <https://www.treasury.gov.ua/ua/file-storage/richniy-zvit-4>

## EFFECTIVENESS AND ACCESSIBILITY OF THE HEALTH SYSTEM

One of the main indicators to assess the effectiveness of the health care system in the country is the mortality rate, i.e. the number of deaths from various causes per certain population. In 2018, the mortality rate in Ukraine per thousand people was 14,7, while in the EU, the respective figure was about 2 (2016)<sup>32</sup>.

At the same time, mortality rates from the most common diseases per 100,000 population differ in Ukraine and the EU due to different methods of calculating of statistical data. The mortality rate from circulatory system diseases per 100 thousand population in Ukraine is 996,6, out of which 693,3 – from coronary heart disease. The highest rate is observed in Chernihiv region (1410,8). In the EU, 0,02% of the population died of coronary heart disease as of 2016 (86,878 people)<sup>33</sup>. The mortality rate from tumors per 100 thousand population is 200,3, with the highest rates in Dnipropetrovsk, Zaporizhzhia and Sumy regions<sup>34</sup>.

The efficiency of the health care system is also evidenced by the percentage of people who are satisfied with medical care. For instance, according to the “Health Index. Ukraine” study, in 2018, 57% of respondents were rather satisfied with the care provided by family doctors, and 18,8 % were completely satisfied, i.e. a total of 75,8% of respondents. In 2019, the respective figures were 45,6% and 27,5%. In other words, the total figure was 73,1%, although there was a shift in sentiment, a decrease in the number of those who were rather satisfied and an increase in those who were completely satisfied. Among the leaders of the last year were Zhytomyr region (71,4% rather satisfied with medical care) and Donetsk region (53,3% completely satisfied)<sup>35</sup>.

If we talk about the percentage of those who visited a doctor during an illness that happened during the last 12 months, it was 63,5% of respondents in 2019. At the same time, only 1% of those who did not have health issues went to a doctor<sup>36</sup>. The top three include Volyn, Ternopil, and Ivano-Frankivsk regions.

Vaccination and disease prevention are key elements of the EU Member States health care systems and demonstrate a level of trust in the health care system. According to the “Health Index. Ukraine” study (2019) the share of people who underwent fluorography during the last 12 months was 57,3%, 22,2%

(women) had mammography, and 44,4% did a cardiogram<sup>37</sup>. These examples are sufficient to note that there is a lack of information campaigns in Ukraine on disease prevention, which would explain the importance of undergoing these or other medical examinations or procedures every year.

Among such medical examinations and tests as visits to a dentist, gynecologist (women), urologist (men), cardiogram, fluorography, mammography and cytospin (women), Mykolaiv (40,3% ), Zakarpattia (33,5%), and Kyrovohrad regions (15,1%) demonstrate the lowest indicators for at least two performed examinations or tests.

In terms of vaccination, in 2019, 40,7% of respondents in Ukraine were very positive about it, while 39,7% were rather positive, i.e. a total of 80,4% had positive attitudes towards vaccination<sup>38</sup>. Among the leaders were Mykolaiv (58,3% very positive) and Zhytomyr (64,4% rather positive) regions.

Interestingly, according to the Wellcome Global Monitor 2018, Europe has become the most skeptical region in the world in terms of vaccination, and France was the country with the lowest level of confidence in vaccination safety (47%). At the same time, in Germany the respective figure was 67%, with 65% in the Czech Republic, 73% in Finland, and 78% in Poland<sup>39</sup>. These data are very relevant given the global race to develop a coronavirus vaccine and, subsequently, the need to persuade people to agree to immunization.

In terms of health care, the Association Agreement with the EU provides for the reform of primary medical care and the introduction of family doctors. This allows to increase the availability of doctors for citizens and simplifies registration procedures. For instance, in terms of the number of signed declarations on the provision of primary health care relative to the total population of the region, the leaders are Vinnytsia, Kyiv, Volyn, Khmelnytsky, and Lviv regions. As of May 18, 2020, a total of 29.9 million declarations have been signed in Ukraine.

Accessibility of the health care system provides equal and comprehensive access to medical services. At the same time, according to the “Health Index. Ukraine,” 17,7% of patients in Ukraine were forced to refuse outpatient care due to lack of funds (too expensive drugs, services, or transportation) during the year before the survey has been conducted. The highest rate was in Mykolaiv region (31,1%)<sup>40</sup>.

<sup>32</sup> *Population of Ukraine in 2018, demographic yearbook*, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

<sup>33</sup> *Population on 1 January*, <https://ec.europa.eu/eurostat/tgm/table.do?tab=table&language=en&pcode=tps00001&tableSelection=1&footnotes=yes&labeling=labels&plugin=1>

<sup>34</sup> *State Statistics Service of Ukraine*, <http://www.ukrstat.gov.ua>

<sup>35</sup> *Health Index. Ukraine*, <http://health-index.com.ua>

<sup>36</sup> *Ibid.*

<sup>37</sup> *Ibid.*

<sup>38</sup> *Attitudes of people who have children in the household and are aware of their state of health to vaccination (overall data for 2019, Health Index. Ukraine)*, <http://health-index.com.ua>

<sup>39</sup> *Wellcome Global Monitor 2018*, <https://wellcome.ac.uk/reports/wellcome-global-monitor/2018>

<sup>40</sup> *Health Index. Ukraine*, <http://health-index.com.ua>

The accessibility and efficiency of the health care system could be also evidenced by the number of medical staff. As of December 31, 2019, the number of doctors in medical and preventive institutions of Ukraine (excluding dentists, training and research facilities employees, management staff) reached 141,228 specialists, which is 3,36 per thousand people<sup>41</sup>. In the EU, the respective figure 3,6 (however, it applies to all practicing physicians, without detailed clarification). At the same time in Germany, for example, it is 4,3 per thousand population<sup>42</sup>.

The number of paramedical staff for the same period reached 296,054, which is 7,5 per thousand population<sup>43</sup>. In the EU, the respective figure per thousand population is 8,5, and in Germany it is 12<sup>44</sup>. The largest number of paramedics per thousand population in Ukraine is in Rivne, Chernihiv, Ivano-Frankivsk regions. Luhansk, Mykolaiv, and Donetsk regions have the fewest staff.

As of December 31, 2019, the number of general practitioners or family doctors was 15,029, which is 0,36 per thousand population. Most family doctors have their practice in Vinnytsia, Zakarpattia and Ternopil regions. Luhansk and Kyrovohrad regions have the fewest staff (154 and 260) in general and per thousand population<sup>45</sup>.

However, low indicators of Donetsk and Luhansk regions in terms of the number of medical staff can be partly explained by the difficult security and humanitarian situation in these regions.

In turn, the number of hospital beds provides information on the maximum number of patients who can be treated in an inpatient setting at the same time. As of December 31, 2019, the number of hospital beds per 1,000 population was 5,8<sup>46</sup>. In the EU, the respective figure per thousand population is 5 (data of 2017)<sup>47</sup>. Dnipropetrovsk region, Kyiv city, and Kharkiv region have the most beds. However, Chernihiv, Kyrovohrad and Dnipropetrovsk regions are the leaders in the number of beds per thousand population

The planned capacity of outpatient facilities is no less important. For instance, in terms of the number of visits to doctors (excluding dentists) in clinics per thousand population among the leaders were Kherson, Poltava and Chernihiv regions (as of December 31, 2019).

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**Thus, these data provide insight into the importance of changes in the health care system. An analysis of the EU practices would allow to take into account other countries' mistakes, as well as create an opportunity to introduce the best and adapted models in Ukrainian realities.**

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<sup>41</sup> *Medical personnel and the network of health care institutions of the MH of Ukraine*, [http://medstat.gov.ua/file/PDF\\_dov/12.pdf](http://medstat.gov.ua/file/PDF_dov/12.pdf)

<sup>42</sup> *State of Health in the EU*, [https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu\\_25227041](https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu_25227041)

<sup>43</sup> *Medical personnel and the network of health care institutions of the MH of Ukraine*, [http://medstat.gov.ua/file/PDF\\_dov/12.pdf](http://medstat.gov.ua/file/PDF_dov/12.pdf)

<sup>44</sup> *State of Health in the EU*, [https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu\\_25227041](https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu_25227041)

<sup>45</sup> *Medical personnel and the network of health care institutions of the MH of Ukraine*, [http://medstat.gov.ua/file/PDF\\_dov/12.pdf](http://medstat.gov.ua/file/PDF_dov/12.pdf)

<sup>46</sup> *Ibid.*

<sup>47</sup> *State of Health in the EU*, [https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu\\_25227041](https://www.oecd-ilibrary.org/social-issues-migration-health/state-of-health-in-the-eu_25227041)

## PARTNERS' ASSISTANCE IN THE IMPLEMENTATION OF CHANGES

In this case, Ukraine's cooperation with Western partners in health care reforms, which become increasingly valuable in the context of the coronavirus pandemic, is extremely useful. The pandemic has contributed to the increasing role of medical diplomacy and, consequently, to the exchange of experiences with other countries and to a greater priority to health care reforms in development cooperation.

At the same time, Chapter 22 of the EU-Ukraine Association Agreement provides for the harmonization of Ukrainian health care legislation with the EU standards, in particular with regard to the prevention of infectious diseases, the blood safety system, and the fight against tobacco smoking. Today, GFA Consulting Group GmbH (GFA) is implementing the project *"Support to Ukraine for developing a modern public health system"* in a consortium with the Institute of Health and Social Welfare of Finland<sup>48</sup>. The cost of the project is almost 3 million euros.

This project should contribute to the modernization and development of a sustainable public health system in Ukraine, which would be able to ensure standards of disease prevention and control in accordance with the EU legislation and practice. It is also about building a sustainable blood safety system in Ukraine, improving the quality management system, creating donor registers and unified blood transfusion standards, promoting donorship and establishing an independent agency in this area.

The allocation of more than 402 million euros<sup>49</sup> in humanitarian and rehabilitation aid to the victims of the conflict in Eastern Ukraine since its beginning, which in particular contributes to the reconstruction and rehabilitation of local health care facilities, psychosocial assistance, etc., is equally important.

Ukraine, together with EU partner countries, also participates in a EUR 3 million anti-drug project. This project is implemented through the European Monitoring Center for Drugs and Drug Addiction (EMCDDA).

Furthermore, the European Investment Bank (EIB) provided a EUR 75 million loan in the form of investments in the safety of the city roads of Dnipro, Kharkiv, Kyiv, Lviv, and Odesa. Improving road safety is one of the Ukrainian authorities' priorities aimed at reducing the number of road accidents and their victims. The Neighborhood Investment Facility (NIF) also allocated a EUR 4.25 million grant from the EU for project preparation, capacity building, and monitoring.

Moreover, the EIB, together with the European Commission and the Government of Ukraine, has developed an Emergency Early Recovery Credit Program. Under this program, 200 million euros in loans are allocated to local authorities of government-controlled territories of Donetsk and Luhansk regions, as well as to local governments of Kharkiv, Dnipropetrovsk, and Zaporizhzhia regions. Since 2015, this program has been implemented by the UNDP. For example, a year ago, six medical institutions have been opened in Kharkiv after reconstruction, the EIB invested UAH 53.8 million. In Prymorsk, the polyclinic building of the Central District Hospital and the main building have been reconstructed (the EIB provided loans of 1.3 million and 0.4 million euros, respectively).

Finally, the European Centre for Disease Prevention and Control (ECDC) has been established in 2004 to combat communicable diseases<sup>50</sup>, and the extension of its mandate and resources are currently being discussed in the EU. Ukraine may also participate in the activities of this Centre during a pandemic.

Not only the European Union but also the United States helps Ukraine. Over the past 20 years, the United States has invested almost USD 362 million in medical aid to Ukraine<sup>51</sup>. The main recipient of funds is the United States Agency for International Development (USAID). In cooperation with the authorities and civil society organizations of Ukraine and other partners, the USAID mission contributes to the overall development of Ukraine's health care system. For instance, the **"USAID Health Reform Support" project** has been operating since 2018. It promotes medical reforms, the fight against corruption, and the transparency of the health care system, which should make quality medical services accessible to Ukrainians.

Another USAID objective is to provide access to psychosocial support and treatment to Ukrainians affected by the conflict in Eastern Ukraine. For example, the project **"Enhancing Torture Survivor Mental Health Services"** is implemented by the Johns Hopkins University Bloomberg School of Public Health and the National University of Kyiv-Mohyla Academy.

<sup>48</sup> *The EU projects in Ukraine*, [https://eeas.europa.eu/delegations/ukraine/10722/проекти-єс-в-україні\\_uk](https://eeas.europa.eu/delegations/ukraine/10722/проекти-єс-в-україні_uk)

<sup>49</sup> *The EU and Ukraine*, [https://eeas.europa.eu/delegations/ukraine/10781/україна-та-єс\\_uk](https://eeas.europa.eu/delegations/ukraine/10781/україна-та-єс_uk)

<sup>50</sup> *Protecting Europe from epidemics: Director named for new EU health agency*, [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_04\\_1472](https://ec.europa.eu/commission/presscorner/detail/en/IP_04_1472)

<sup>51</sup> *Update: United States is continuing to lead the humanitarian and health assistance response to Covid-19*, <https://ua.usembassy.gov/uk/update-the-united-states-is-continuing-to-lead-the-humanitarian-and-health-assistance-response-to-covid-19/>

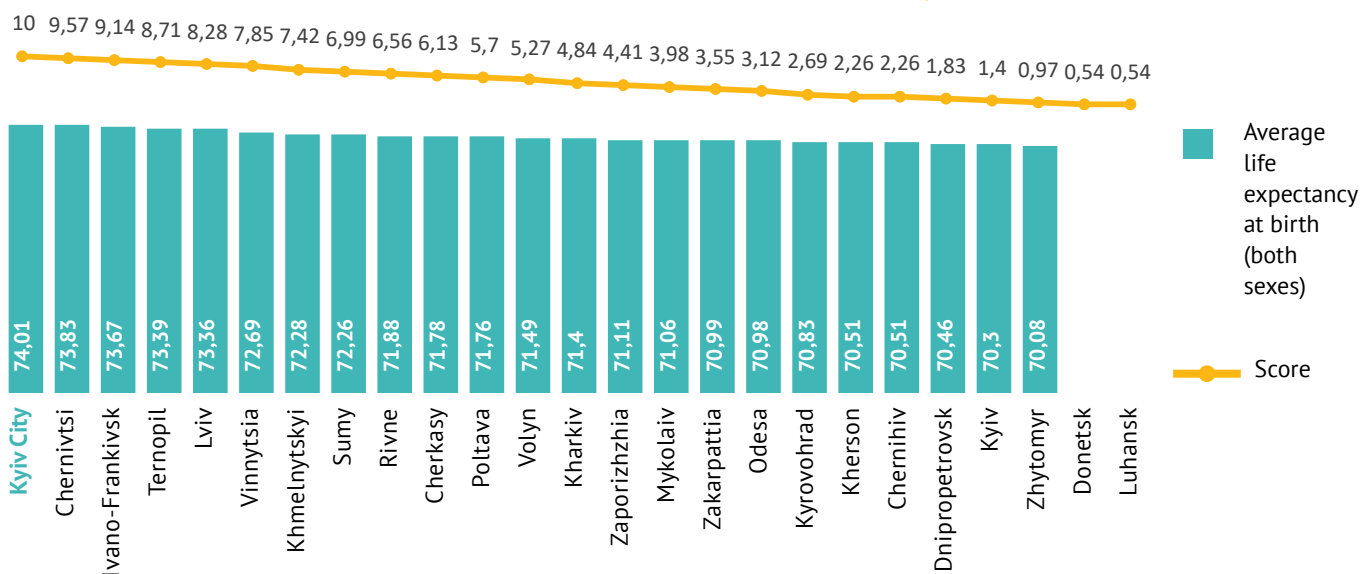
One important aspect of USAID's activities is the response to infectious diseases, such as HIV/AIDS, tuberculosis, and hepatitis C. Ukraine has the second largest HIV epidemic in the region, as well as one of the highest incidence rates of multi-drug-resistant tuberculosis (MDR-TB). In cooperation with the The U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the USAID is working with a number of partners to ensure the emergence of an AIDS-free generation in Ukraine and to curb the spread of tuberculosis<sup>52</sup>.

Another area of activity is supporting immunization measures. The USAID disseminates information on vaccine benefits, facilitate the accessibility of high-quality vaccines and the development of the National Immunization Schedule (***"Fighting Misinformation About Vaccines Project"*** with UNICEF, ***"Immunization Strengthening Support to Ukraine Activity"*** project in partnership with the Center for Disease Control, Atlanta).

On top of that, the ***"Safe, affordable and effective medicines for Ukrainians"*** project (SAFEMed) is helping strengthen Ukraine's pharmaceutical system. ***"Supporting eHealth Infrastructure Development in Ukraine"*** strengthens the eHealth system and helps reduce corruption through assistance in the eHealth system. Finally, the ***"Strengthening Rehabilitation Services in Health Systems"*** project helps improve the professional training of physiotherapists and develop national rehabilitation measures.

<sup>52</sup> Healthcare, <https://www.usaid.gov/node/71471>

Graph 1 | Average life expectancy at birth in 2018

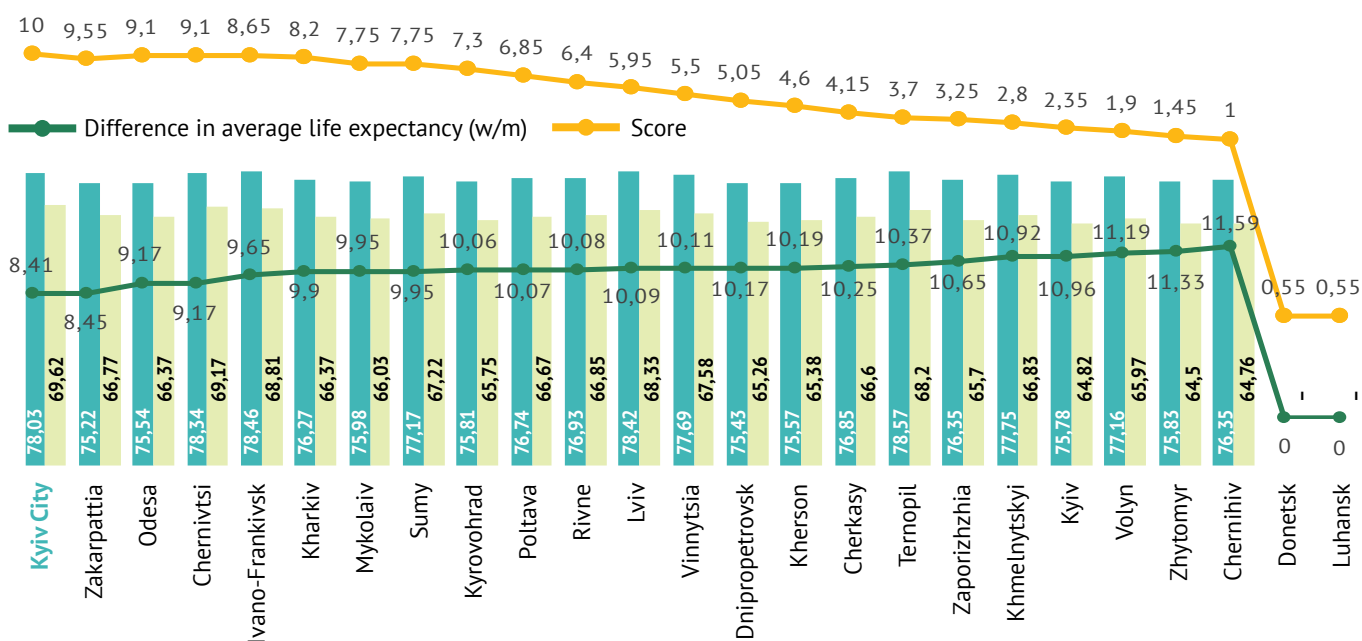


Indicator weight is 10 points. The increment between scores is 0.43 points (calculated using the formula, where increment = 10 points / 23 unique absolute values of the indicator). The region with the highest average life expectancy at birth (both sexes) obtained the highest score, and each subsequent region in the ranking was rated 0.43 points lower. \*Data obtained from the State Statistics Service website; information on Luhansk and Donetsk regions is not available<sup>53</sup>.

Graph 2

Difference in the average life expectancy of men and women at birth in 2018

Average life expectancy at birth (women)  
Average life expectancy at birth (men)



<sup>53</sup> Population of Ukraine in 2018, demographic yearbook, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

<sup>54</sup> Population of Ukraine in 2018, demographic yearbook, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

**Table 3.** Average life expectancy at the age of 65 in 2018

Region	Average life expectancy at the age of 65 (both sexes)	Score
<b>Kyiv City</b>	16,42	10
Lviv	15,78	9,57
Ivano-Frankivsk	15,62	9,14
Chernivtsi	15,44	8,71
Vinnitsia	15,40	8,28
Ternopil	15,33	7,85
Khmelnitskyi	15,31	7,42
Odesa	15,25	6,99
Kyrovohrad	15,18	6,56
Volyn	15,15	6,13
Cherkasy	15,15	6,13
Zaporizhzhia	15,11	5,7
Mykolaiv	15,09	5,27
Sumy	15,03	4,84
Chernihiv	14,99	4,41
Dnipropetrovsk	14,98	3,98
Zhytomyr	14,85	3,55
Rivne	14,84	3,12
Kharkiv	14,79	2,69
Kherson	14,72	2,26
Poltava	14,68	1,83
Zakarpattia	14,23	1,4
Kyiv	14,11	0,97
Donetsk	–	0,54
Luhansk	–	0,54

Indicator weight is 10 points. The increment between scores is 0.43 points (calculated using the formula, where increment = 10 points / 23 unique absolute values of the indicator). The region with the highest average life expectancy at the age of 65 obtained the highest score, and each subsequent region in the ranking was rated 0.43 points lower. \*Data obtained from the State Statistics Service website; information on Luhansk and Donetsk regions is not available<sup>55</sup>.

**Table 4.** Difference in the average life expectancy of men and women at the age of 65 in 2018

Region	Average life expectancy at the age of 65 (women)	Average life expectancy at the age of 65 (men)	Difference in average life expectancy (w/m)	Score
<b>Kyiv City</b>	17,69	14,60	3,09	10
Odesa	16,63	13,25	3,38	9,55
Zakarpattia	15,81	12,05	3,76	9,1
Kyrovohrad	16,73	12,83	3,9	8,65
Kharkiv	16,37	12,36	4,01	8,2
Dnipropetrovsk	16,58	12,46	4,12	7,75
Sumy	16,70	12,58	4,12	7,75
Mykolaiv	16,74	12,61	4,13	7,3
Chernivtsi	17,17	13,00	4,17	6,85
Cherkasy	16,91	12,58	4,33	6,4
Lviv	17,59	13,21	4,38	5,95
Ivano-Frankivsk	17,43	13,04	4,39	5,5
Rivne	16,63	12,21	4,42	5,05
Poltava	16,49	12,01	4,48	4,6
Kherson	16,56	12,00	4,56	4,15
Vinnitsia	17,27	12,66	4,61	3,7
Volyn	17,03	12,41	4,62	3,25
Chernihiv	16,83	12,17	4,66	2,8
Zaporizhzhia	16,95	12,29	4,66	2,8
Kyiv	16,00	11,34	4,66	2,8
Zhytomyr	16,82	11,95	4,87	2,35
Ternopil	17,37	12,44	4,93	1,9
Khmelnitskyi	17,34	12,39	4,95	1,45
Donetsk	–	–	–	1
Luhansk	–	–	–	1

Indicator weight is 10 points. The increment between scores is 0.45 points (calculated using the formula, where increment = 10 points / 22 unique absolute values of the indicator). The region with the smallest gap in life expectancy between men and women at the age of 65 obtained the highest score, and each subsequent region in the ranking was rated 0.45 points lower. \*Data obtained from the State Statistics Service website; information on Luhansk and Donetsk regions is not available<sup>56</sup>.

<sup>55</sup> Population of Ukraine in 2018, demographic yearbook, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

<sup>56</sup> Ibid.



**Table 5.** Number of doctors in treatment and prevention institutions (excluding dentists, training and research facilities employees, management staff)<sup>57</sup> per 1 thousand population

Table 5		Number of doctors in treatment and prevention institutions (excluding dentists, training and research facilities employees, management staff) per 1 thousand population		
Region	Number of doctors in treatment and prevention institutions (excluding dentists, training and research facilities employees, management staff) as of 31.12.2019	Number of doctors per 1 thousand population	Score	
<b>Ivano-Frankivsk</b>	6707	4,9	10	
Chernivtsi	4177	4,63	9,6	
Lviv	11098	4,42	9,2	
Kyiv City	13015	4,39	8,8	
Ternopil	4389	4,2	8,4	
Vinnytsia	6103	3,95	8	
Zaporizhzhia	6592	3,9	7,6	
Poltava	5337	3,8	7,2	
Khmelnyskyi	4738	3,77	6,8	
Kharkiv	9866	3,71	6,4	
Odesa	8689	3,66	6	
Rivne	4207	3,65	5,6	
Sumy	3838	3,59	5,2	
Volyn	3667	3,55	4,8	
Dnipropetrovsk	11167	3,51	4,4	
Cherkasy	4093	3,43	4	
Chernihiv	3389	3,41	3,6	
Kyiv	6008	3,38	3,2	
Zhytomyr	4071	3,37	2,8	
Zakarpattia	4214	3,36	2,4	
Kyrovohrad	2920	3,13	2	
Kherson	2930	2,85	1,6	
Mykolaiv	3125	2,79	1,2	
Donetsk	5063	1,22	0,8	
Luhansk	1825	0,85	0,4	

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest number of doctors per 1 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data of the State Statistics Service on the total population of the regions were used for the calculation of the number of doctors per 1 thousand population as of December 31, 2019<sup>58</sup>.

<sup>57</sup> Statistics, <http://medstat.gov.ua/ukr/statdan.html>

<sup>58</sup> Population (estimated) on December 1, 2019 and the average population in January-November 2019, <http://www.ukrstat.gov.ua>.

**Table 6.** Number of paramedical staff per 1 thousand population

Table 6		Number of paramedical staff per 1 thousand population		
Region	Total number as of December 31, 2019 <sup>59</sup>	Number of paramedical staff per 1 thousand population	Score	
<b>Rivne</b>	10 960	9,5	10	
Chernihiv	9 332	9,4	9,6	
Ivano-Frankivsk	12 723	9,3	9,2	
Ternopil	9 588	9,23	8,8	
Sumy	9 599	8,98	8,4	
Volyn	9 210	8,93	8	
Zhytomyr	10 626	8,79	7,6	
Khmelnyskyi	10 819	8,6	7,2	
Kyrovohrad	7 994	8,56	6,8	
Cherkasy	10 198	8,55	6,4	
Lviv	21 469	8,54	6	
Chernivtsi	7 676	8,51	5,6	
Vinnytsia	12 930	8,36	5,2	
Poltava	11 404	8,22	4,8	
Zaporizhzhia	13 185	7,8	4,4	
Kherson	7 420	7,21	4	
Zakarpattia	9 004	7,18	3,6	
Kyiv	12 279	6,9	3,2	
Dnipropetrovsk	21 918	6,89	2,8	
Kharkiv	17 562	6,6	2,4	
Odesa	15 650	6,58	2	
Kyiv City	19 457	6,56	1,6	
Mykolaiv	7 197	6,42	1,2	
Donetsk	12 927	3,13	0,8	
Luhansk	4 927	2,3	0,4	

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest number of paramedical personnel per 1 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data of the State Statistics Service on the total population of the regions were used for the calculation of the number of paramedical staff per 1 thousand population as of December 31, 2019<sup>60</sup>.

<sup>59</sup> Statistics, <http://medstat.gov.ua/ukr/statdan.html>

<sup>60</sup> Ibid.

**Table 7.** Number of general practitioners/family doctors per 1 thousand population

Table 7 Number of general practitioners/ family doctors per 1 thousand population			
Region	Total number as of December 31, 2019 <sup>61</sup>	Number of general practitioners/family doctors per 1 thousand population	Score
Vinnitsia	851	0,55	10
Zakarpattia	682	0,54	9,5
Ternopil	541	0,52	9
Lviv	1 221	0,49	8,5
Chernivtsi	432	0,48	8
Zhytomyr	543	0,45	7,5
Poltava	617	0,44	7
Khmelnytskyi	555	0,44	7
Volyn	443	0,43	6,5
Dnipropetrovsk	1 345	0,42	6
Zaporizhzhia	694	0,41	5,5
Ivano-Frankivsk	562	0,41	5,5
Rivne	477	0,41	5,5
Odesa	953	0,4	5
Kyiv	661	0,37	4,5
Cherkasy	446	0,37	4,5
Mykolaiv	381	0,34	4
Chernihiv	337	0,34	4
Kyiv City	985	0,33	3,5
Sumy	354	0,33	3,5
Kyrovohrad	260	0,28	3
Kharkiv	724	0,27	2,5
Kherson	261	0,25	2
Donetsk	550	0,13	1,5
Luhansk	154	0,07	1

Indicator weight is 10 points. The increment between scores is 0.5 points (calculated using the formula, where increment = 10 points / 20 unique absolute values of the indicator). The region with the highest number of general practitioners or family doctors per 1 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.5 points lower. \*Data of the State Statistics Service on the total population of the regions were used for the calculation of the number of family doctors per 1 thousand population as of December 31, 2019<sup>62</sup>.

<sup>61</sup> Statistics, <http://medstat.gov.ua/ukr/statdan.html>

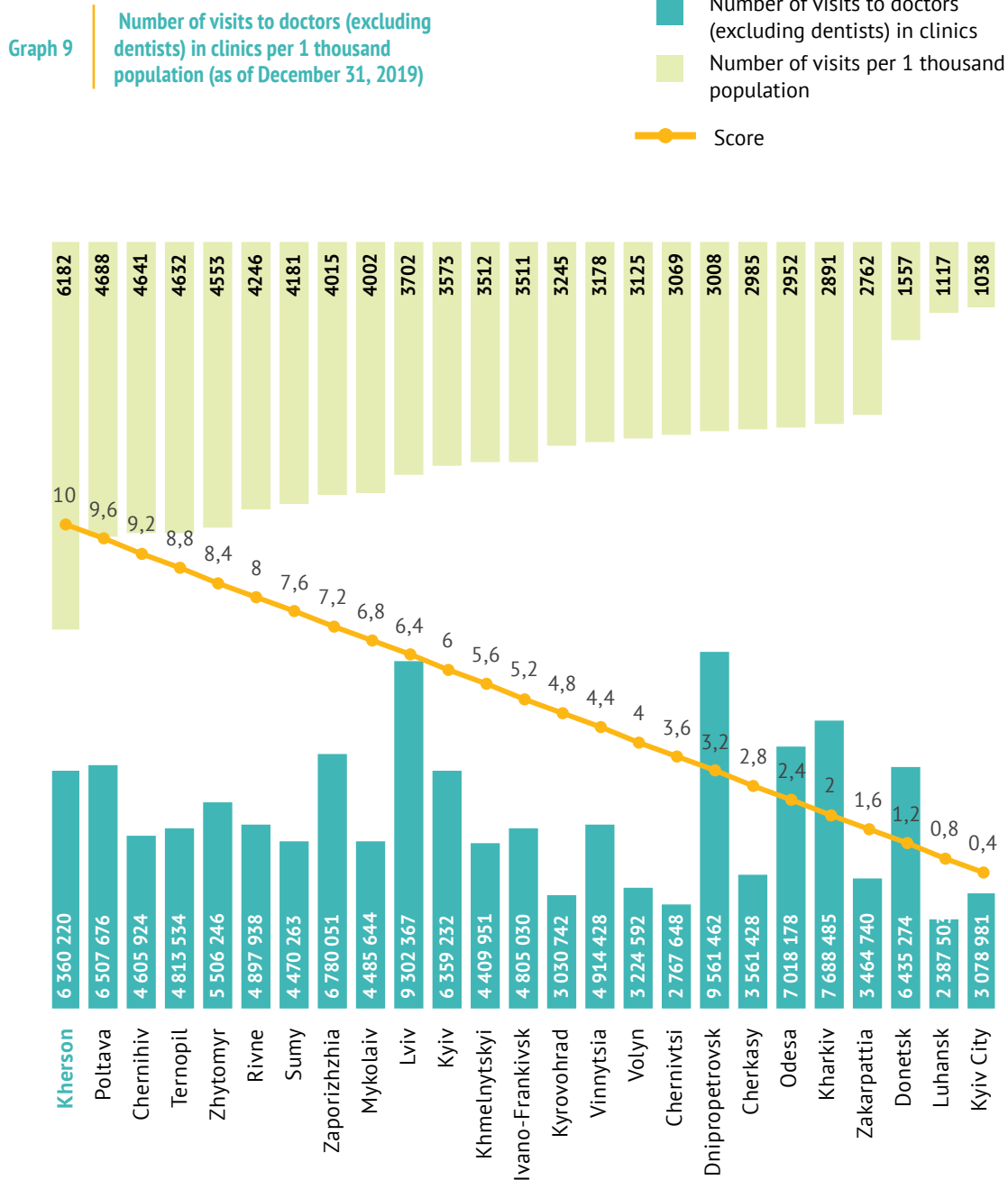
<sup>62</sup> Population (estimated) on December 1, 2019 and the average population in January-November 2019, <http://www.ukrstat.gov.ua>.

**Table 8.** Number of beds (actually deployed + phased out for repairs) in hospitals per 1 thousand population

Table 8 Number of beds (actually deployed + phased out for repairs) in hospitals per 1 thousand population			
Region	Number of beds (actually deployed + phased out for repairs) as of December 31, 2019 <sup>63</sup>	Number of beds per 1 thousand population	Score
Chernihiv	7 779	7,84	10
Kyrovohrad	6 723	7,2	9,6
Dnipropetrovsk	22 709	7,14	9,2
Ternopil	7 274	7	8,8
Sumy	7 268	6,8	8,4
Khmelnytskyi	8 470	6,75	8
Cherkasy	7 968	6,68	7,6
Zaporizhzhia	11 215	6,64	7,2
Kharkiv	17 576	6,6	6,8
Poltava	9 087	6,55	6,4
Volyn	6 726	6,52	6
Kherson	6 699	6,5	5,6
Lviv	15 768	6,27	5,2
Ivano-Frankivsk	8 564	6,26	4,8
Rivne	7 151	6,2	4,4
Kyiv City	18 104	6,1	4
Zakarpattia	7 614	6,07	3,6
Kyiv	10 810	6,07	3,6
Chernivtsi	5 473	6,07	3,6
Odesa	14 165	5,96	3,2
Vinnitsia	9 033	5,84	2,8
Zhytomyr	7 001	5,79	2,4
Mykolaiv	6 239	5,57	2
Luhansk	5 779	2,7	1,8
Donetsk	11 065	2,68	1,4

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 24 unique absolute values of the indicator). The region with the highest number of hospital beds per 1 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*In order to calculate the number of beds per thousand population the data of the State Statistics Service on the total population of regions and the city of Kyiv were taken into account.

<sup>63</sup> Statistics, <http://medstat.gov.ua/ukr/statdan.html>



Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest number of visits to doctors per 1 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower.

**Table 10.** Percentage of planned vaccinations in 2019<sup>64</sup>

Table 10.1		DTP3 up to one year (diphtheria-tetanus-pertussis vaccine)			Table 10.2		Hepatitis B up to one year		
Region	Plan	Number of vaccinations	%	Score	Region	Plan	Number of vaccinations	%	Score
Mykolaiv	9 053	9 057	100,0	10	Poltava	9 743	9 125	93,7	10
Kyrovohrad	7 127	6 648	93,3	9,6	Dnipropetrovsk	25 035	23 405	93,5	9,6
Poltava	9 743	9 008	92,5	9,2	Sumy	7 074	6 478	91,6	9,2
Sumy	7 074	6 371	90,1	8,8	Mykolaiv	9 053	8 220	90,8	8,8
Kyiv City	34 536	30 971	89,7	8,4	Luhansk	3 608	3 232	89,6	8,4
Ternopil	8 645	7 675	88,8	8	Kyiv City	34 536	29 284	84,8	8
Vinnytsia	12 769	11 119	87,1	7,6	Chernihiv	6 762	5 515	81,6	7,6
Khmelnyskyi	10 573	9 208	87,1	7,2	Kyiv	17 184	13 923	81,0	7,2
Luhansk	3 608	3 092	85,7	6,8	Kyrovohrad	7 127	5 767	80,9	6,8
Cherkasy	8 550	7 265	85,0	6,4	Vinnytsia	12 769	10 318	80,8	6,4
Zhytomyr	10 558	8 893	84,2	6	Zhytomyr	10 558	8 468	80,2	6
Chernihiv	6 762	5 649	83,5	5,6	Volyn	11 255	9 001	80,0	5,6
Kyiv	17 184	14 283	83,1	5,2	Cherkasy	8 550	6 624	77,5	5,2
Chernivtsi	8 639	7 027	81,3	4,8	Chernivtsi	8 639	6 621	76,6	4,8
Zaporizhzhia	12 606	10 110	80,2	4,4	Kharkiv	19 485	14 837	76,1	4,4
Kherson	9 016	7 007	77,7	4	Zaporizhzhia	12 606	9 569	75,9	4
Volyn	11 255	8 611	76,5	3,6	Ivano-Frankivsk	12 827	9 650	75,2	3,6
Ivano-Frankivsk	12 827	9 761	76,1	3,2	Kherson	9 016	6 639	73,6	3,2
Lviv	23 073	17 539	76,0	2,8	Khmelnyskyi	10 573	7 720	73,0	2,8
Dnipropetrovsk	25 035	18 788	75,0	2,4	Donetsk	12 542	9 118	72,7	2,4
Kharkiv	19 485	14 232	73,0	2	Ternopil	8 645	6 208	71,8	2
Rivne	13 242	9 566	72,2	1,6	Lviv	23 073	15 585	67,5	1,6
Odesa	23 061	16 634	72,1	1,2	Rivne	13 242	8 097	61,1	1,2
Donetsk	12 542	8 837	70,5	0,8	Odesa	23 061	13 853	60,1	0,8
Zakarpattia	13 775	9 003	65,4	0,4	Zakarpattia	13 775	7 522	54,6	0,4

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest rate of fulfilled vaccinations obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower.

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest rate of fulfilled vaccinations obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower.

<sup>64</sup> Vaccination coverage, <https://phc.org.ua/kontrol-zakhvoryuvan/imunizaciya/okhoplennya-scheplennymi>

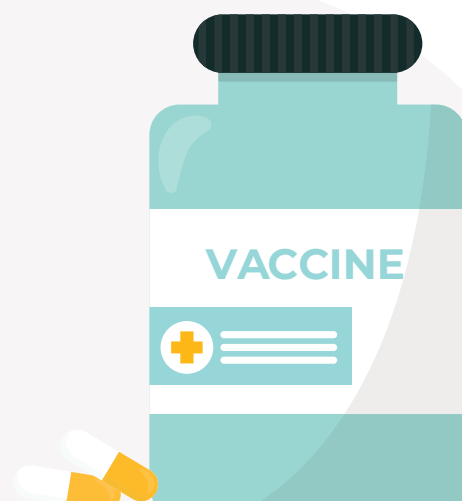


Table 10.3

## DT (adults, diphtheria and tetanus)

Region	Plan	Number of vaccinations	%	Score
Zaporizhzhia	102 495	102 347	99,9	10
Poltava	182 542	181 926	99,7	9,6
Lviv	160 348	154 763	96,5	9,2
Zakarpattia	89 327	86 096	96,4	8,8
Kherson	107 625	103 445	96,1	8,4
Ternopil	74 253	71 208	95,9	8
Vinnitsia	180 294	168 868	93,7	7,6
Mykolaiv	145 361	135 607	93,3	7,2
Chernivtsi	53 269	49 545	93,0	6,8
Kyrovohrad	43 517	40 335	92,7	6,4
Cherkasy	94 196	85 981	91,3	6
Volyn	58 042	52 890	91,1	5,6
Kyiv City	130 292	117 260	90,0	5,2
Kyiv	150 157	135 004	89,9	4,8
Chernihiv	67 332	57 333	85,1	4,4
Dnipropetrovsk	187 544	156 985	83,7	4
Donetsk	176 526	142 176	80,5	3,6
Ivano-Frankivsk	92 233	73 971	80,2	3,2
Khmelnyskyi	159 705	125 231	78,4	2,8
Kharkiv	275 296	207 753	75,5	2,4
Sumy	157 722	118 706	75,3	2
Zhytomyr	110 441	79 927	72,4	1,6
Odesa	298 576	192 658	64,5	1,2
Rivne	150 509	96 130	63,9	0,8
Luhansk	52 190	15 868	30,4	0,4

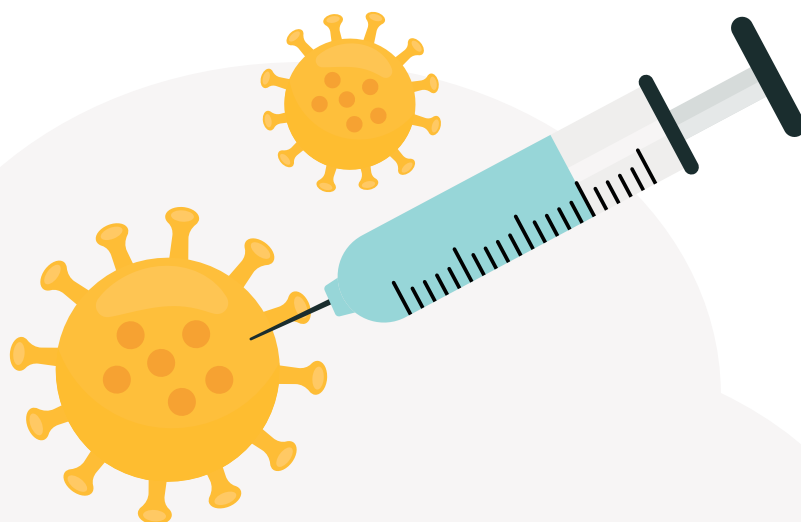
Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest rate of fulfilled vaccinations obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower.

Table 10.4

## MMR (1 year, measles, mumps, and rubella)

Region	Plan	Number of vaccinations	%	Score
Mykolaiv	9 973	9 973	100	10
Dnipropetrovsk	27 418	27 388	99,9	9,57
Chernihiv	6 801	6 750	99,3	9,14
Kharkiv	19 518	19 200	98,4	8,71
Kyrovohrad	7 020	6 897	98,2	8,28
Ternopil	8 491	8 244	97,1	7,85
Poltava	10 141	9 841	97	7,42
Volyn	11 812	11 428	96,7	6,99
Luhansk	3 676	3 517	95,7	6,56
Chernivtsi	8 639	8 200	94,9	6,13
Khmelnyskyi	10 629	10 081	94,8	5,7
Zhytomyr	11 528	10 852	94,1	5,27
Kyiv	17 796	16 711	93,9	4,84
Kyiv City	29 374	27 529	93,7	4,41
Vinnitsia	12 690	11 876	93,6	3,98
Zaporizhzhia	12 602	11 790	93,6	3,98
Sumy	7 979	7 449	93,4	3,55
Zakarpattia	13 737	12 437	90,5	3,12
Ivano-Frankivsk	12 566	11 311	90	2,69
Lviv	23 090	20 779	90	2,69
Kherson	9 017	7 849	87	2,26
Odesa	22 966	19 931	86,8	1,83
Cherkasy	9 494	8 211	86,5	1,4
Donetsk	13 227	11 306	85,5	0,97
Rivne	13 293	11 288	84,9	0,54

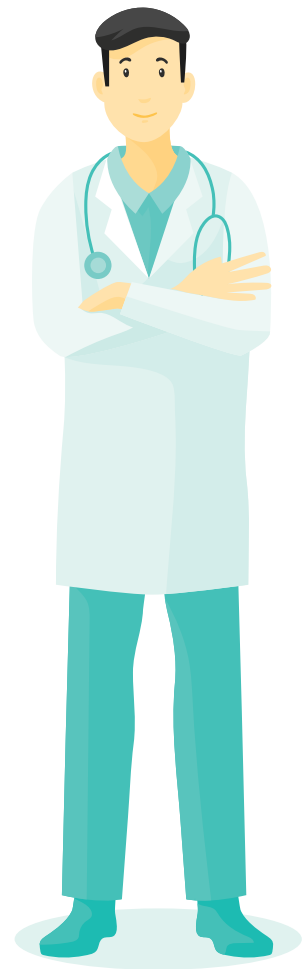
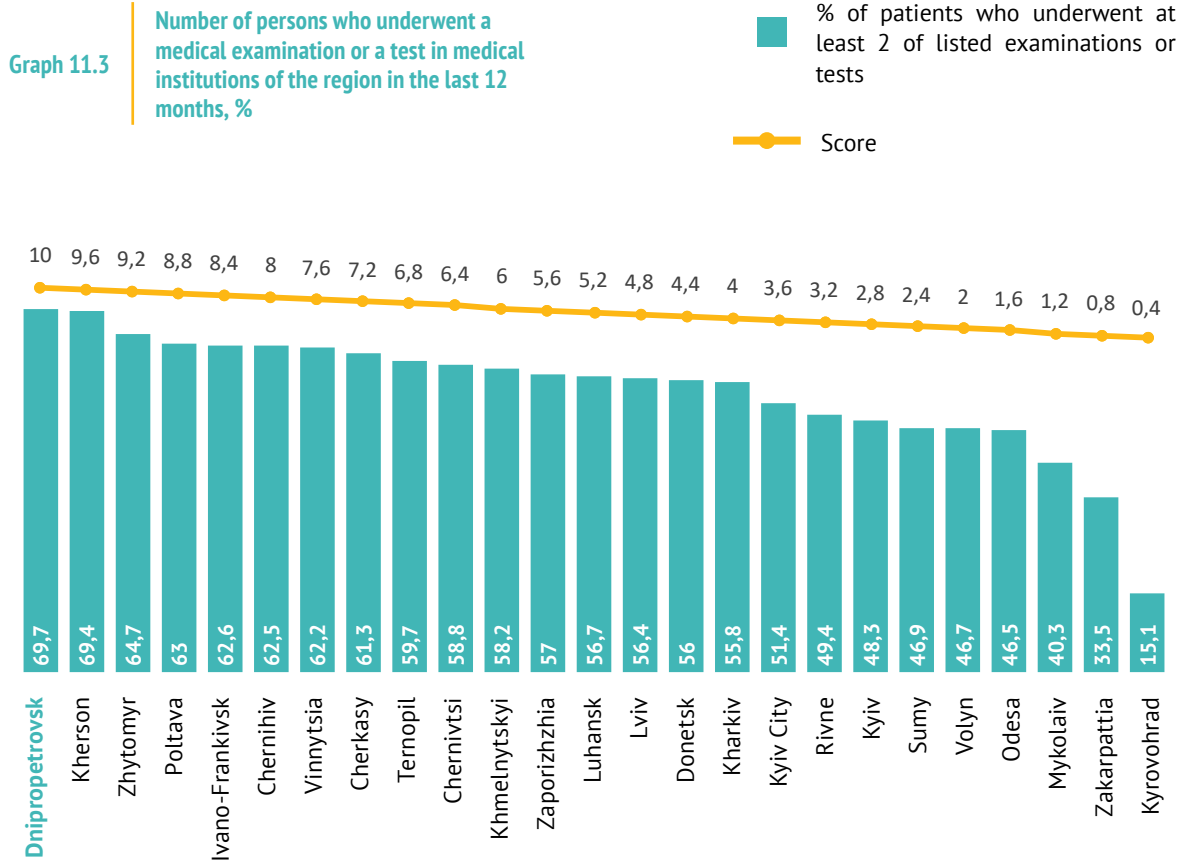
Indicator weight is 10 points. The increment between scores is 0.43 points (calculated using the formula, where increment = 10 points / 23 unique absolute values of the indicator). The region with the highest rate of fulfilled vaccinations obtained the highest score, and each subsequent region in the ranking was rated 0.43 points lower.



**Table 11.** Number of persons who underwent a medical examination or a test in medical institutions of the region in the last 12 months, % ("Health Index. Ukraine", 2019)

Table 11.1				Табл .11.2				
Number of persons who underwent a medical examination or a test in medical institutions of the region in the last 12 months, %				Number of persons who underwent a medical examination or a test in medical institutions of the region in the last 12 months, %				
Region	% of patients examined by a dentist	% of men examined by a urologist	% of women examined by a gynecologist	Region	% women who had cytосmear	% of women who had mammography	% patients who had fluorography	% patients who had prophylactic cardiogram
Vinnysia	47,9	20,7	50,4	Vinnysia	47,5	25,8	56,6	57,2
Volyn	39,6	27,2	43,2	Volyn	35,7	28,2	44,6	42,9
Dnipropetrovsk	50,9	33,8	64,1	Dnipropetrovsk	55,4	26,2	76,4	56
Donetsk	37	17,7	47,7	Donetsk	28,9	20,5	62	47
Zhytomyr	29,4	34,6	68,8	Zhytomyr	51,4	20,3	75,3	52,1
Zakarpattia	22,7	23,6	38,9	Zakarpattia	33,3	5,9	35,7	27,4
Zaporizhzhia	30,9	23,7	41,5	Zaporizhzhia	38,9	11,9	63,8	43,8
Ivano-Frankivsk	51,7	28,4	60,3	Ivano-Frankivsk	55,9	17,3	54,9	50,9
Kyiv	34,6	14	46,8	Kyiv	34,8	20	46,7	44
Kyrovohrad	7,7	4,5	19,5	Kyrovohrad	5,5	6,6	14,9	14,3
Luhansk	41,7	32,2	53,7	Luhansk	41	25,4	68,5	51,2
Lviv	43,8	25,4	50,1	Lviv	42,2	21,8	52,2	47,2
Mykolaiv	18,9	8,1	45,3	Mykolaiv	38	28,7	50,8	29,1
Odesa	39,2	18,9	39,5	Odesa	32,5	22,8	42,4	38
Poltava	52,8	32,2	59,6	Poltava	36,4	30,6	66,9	47,3
Rivne	46,9	18,6	48,1	Rivne	36	23,1	42,4	41,9
Sumy	45,9	26	45,1	Sumy	37,2	14,8	49,3	32,7
Ternopil	44,4	19,8	50,3	Ternopil	43,8	19	60,5	48,3
Kharkiv	38	18,3	57,4	Kharkiv	29,6	20,5	62,7	27,9
Kherson	31,2	31,5	58,9	Kherson	54,8	25,5	79,7	54,1
Khmelnyskyi	51,9	28,3	56,6	Khmelnyskyi	39,9	23,2	55,3	49,3
Cherkasy	47,1	33,8	62,7	Cherkasy	59,8	33,8	61,6	53,4
Chernivtsi	48,8	19,5	56,6	Chernivtsi	52,5	18,7	55,3	48,3
Chernihiv	45,3	26,1	56,4	Chernihiv	50	30,7	68,8	53,9
Kyiv City	52,2	22,9	60,2	Kyiv City	39,6	26,6	48	39,1





**Table 12.** Attitudes towards vaccination (% of those who are aware of the health of their children) (“Health Index. Ukraine”, 2019)

Table 12.1 Attitudes towards vaccination (% of those who are aware of the health of their children)						Table 12.2 Attitudes towards vaccination (% of those who are aware of the health of their children)				
Region	Very positive	Rather positive	Neutral	Rather negative	Very negative	Region	Very positive	Rather positive	Total	Score
Vinnitsia	38,1	39,7	10,8	5,9	5,7	Kyrovohrad	51,6	45,4	97	10
Volyn	34,1	44,6	12,2	7,2	1,8	Chernihiv	50,6	39,1	89,7	9,6
Dnipropetrovsk	57,6	28,7	8	1,1	4,6	Khmelnytskyi	61,2	26,5	87,7	9,2
Donetsk	47,9	33,7	5,6	5,9	6,8	Rivne	42,7	44,9	87,6	8,8
Zhytomyr	21,4	64,4	13,6	0,6	0	Sumy	63,5	24,1	87,6	8,4
Zakarpattia	25,3	40,4	24,4	7,3	2,7	Dnipropetrovsk	57,6	28,7	86,3	8
Zaporizhzhia	40,9	42,5	5,1	8,5	3	Zhytomyr	21,4	64,4	85,8	7,6
Ivano-Frankivsk	23,5	47,3	14,1	7,3	7,7	Luhansk	56,4	28,8	85,2	7,2
Kyiv	33,6	46,5	11	5,2	3,7	Mykolaiv	58,3	26,5	84,8	6,8
Kyrovohrad	51,6	45,4	0,6	2,5	0	Cherkasy	43,4	40,3	83,7	6,4
Luhansk	56,4	28,8	12,3	1	1,5	Zaporizhzhia	40,9	42,5	83,4	6
Lviv	23,8	57,2	11,5	6,5	1,1	Donetsk	47,9	33,7	81,6	5,6
Mykolaiv	58,3	26,5	10,1	2,9	2,2	Lviv	23,8	57,2	81	5,2
Odesa	45,8	28,4	18,7	4,7	2,4	Kyiv	33,6	46,5	80,1	4,8
Poltava	36	41,7	9,8	8,9	3,6	Volyn	34,1	44,6	78,7	4,4
Rivne	42,7	44,9	8,5	3,1	0,8	Vinnitsia	38,1	39,7	77,8	4
Sumy	63,5	24,1	8,5	3,9	0	Poltava	36	41,7	77,7	3,6
Ternopil	52,3	21,5	11,3	5,6	9,3	Kharkiv	21,9	54,9	76,8	3,2
Kharkiv	21,9	54,9	19,9	2,2	1,1	Odesa	45,8	28,4	74,2	2,8
Kherson	45,1	28,6	21,5	4,2	0,7	Ternopil	52,3	21,5	73,8	2,4
Khmelnytskyi	61,2	26,5	11,1	1,2	0	Kherson	45,1	28,6	73,7	2
Cherkasy	43,4	40,3	7,2	4,4	4,7	Chernivtsi	39,9	32,9	72,8	1,6
Chernivtsi	39,9	32,9	14,9	3,9	8,3	Kyiv City	24,5	48	72,5	1,2
Chernihiv	50,6	39,1	7,4	2,9	0	Ivano-Frankivsk	23,5	47,3	70,8	0,8
Kyiv City	24,5	48	17,9	7	2,7	Zakarpattia	25,3	40,4	65,7	0,4

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 24 unique absolute values of the indicator). The region with the highest rate of positive attitudes towards vaccination among households with children obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data obtained from the “Health Index. Ukraine” study of 2019. The following evaluation categories were selected: “very positive” and “rather positive”<sup>66</sup>.



**Table 13.** Percentage of those who had experience of refusing vaccination for a child, ("Health Index. Ukraine", 2019)

Region	Refused vaccination for a child (%)	Score
<b>Luhansk</b>	1	10
Sumy	3,2	9,6
Kyrovohrad	3,6	9,2
Kherson	6,1	8,8
Dnipropetrovsk	8,4	8,4
Zakarpattia	11,5	8
Zaporizhzhia	13,2	7,6
Mykolaiv	13,5	7,2
Chernihiv	14	6,8
Volyn	15,4	6,4
Rivne	16,2	6
Zhytomyr	17,6	5,6
Kharkiv	18,9	5,2
Cherkasy	19,5	4,8
Vinnytsia	20,1	4,4
Donetsk	20,5	4
Khmelnyskyi	21,3	3,6
Kyiv	21,5	3,2
Chernivtsi	22,8	2,8
Odesa	25,9	2,4
Kyiv City	26,4	2
Poltava	26,8	1,6
Ternopil	29,4	1,2
Lviv	30,1	0,8
Ivano-Frankivsk	31,6	0,4

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the smallest number of those who had an experience of refusing vaccination for a child obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data obtained from the "Health Index. Ukraine" study of 2019<sup>67</sup>.

**Table 14.** Number of persons forced to refuse outpatient treatment due to lack of funds during the year before the survey, % ("Health Index. Ukraine", 2019)

Region	Number of persons forced to refuse outpatient treatment due to lack of funds during the year before the survey, %	Score
<b>Kyrovohrad</b>	2,8	10
Ternopil	7,4	9,6
Zakarpattia	13,7	9,2
Ivano-Frankivsk	14,0	8,8
Donetsk	14,2	8,4
Khmelnyskyi	17,1	8
Volyn	18,4	7,6
Chernihiv	20,2	7,2
Poltava	20,7	6,8
Sumy	20,9	6,4
Kyiv	21,0	6
Zhytomyr	23,3	5,6
Rivne	24,7	5,2
Luhansk	24,8	4,8
Vinnytsia	25,0	4,4
Odesa	25,7	4
Chernivtsi	25,8	3,6
Dnipropetrovsk	27,9	3,2
Kherson	28,7	2,8
Kyiv City	30,6	2,4
Lviv	31,6	2
Kharkiv	36,4	1,6
Cherkasy	39,3	1,2
Zaporizhzhia	39,7	0,8
Mykolaiv	42,0	0,4

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the smallest number of persons forced to refuse outpatient treatment due to the lack of funds obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data obtained from the "Health Index. Ukraine" study of 2019<sup>68</sup>.

**Table 15.** Number of persons who are satisfied with the medical care provided by district/ family doctors, % (“Health Index. Ukraine”, 2019)

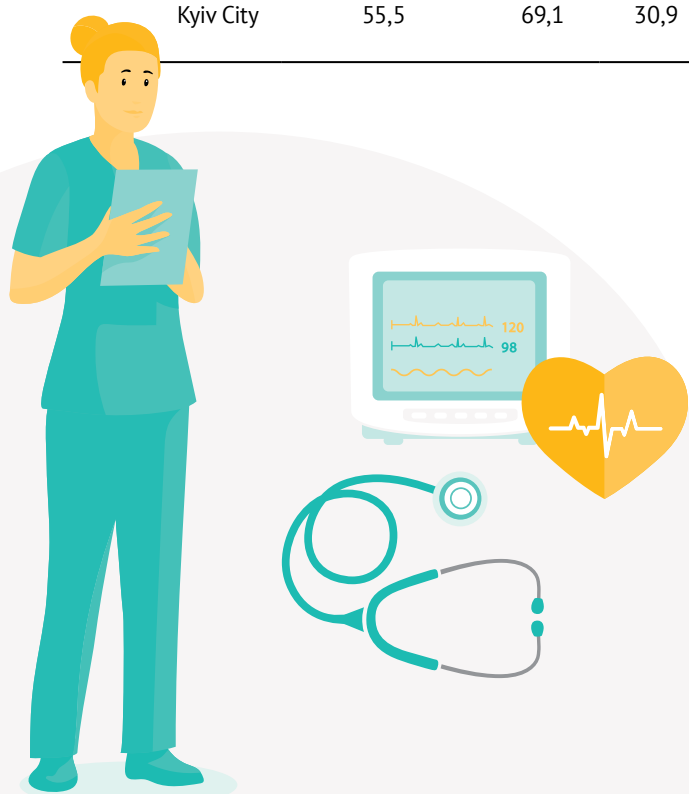
Table 15.1					Table 15.2				
Number of persons who are satisfied with the medical care provided by district/ family doctors, %					Number of persons who are satisfied with the medical care provided by district/ family doctors, %				
Region	Completely dissatisfied	Rather dissatisfied	Rather satisfied	Completely satisfied	Region	Rather satisfied	Completely satisfied	Total	Score
<b>Vinnitsia</b>	8,2	15	33,9	43	<b>Volyn</b>	57,2	29,1	86,3	10
Volyn	2,5	11,2	57,2	29,1	Kherson	68,5	16,4	84,9	9,6
Dnipropetrovsk	12,9	24,2	45,7	17,2	Zhytomyr	71,4	13,2	84,6	9,2
Donetsk	12,7	9,1	24,9	53,3	Ternopil	31,1	52,8	83,9	8,8
Zhytomyr	6,9	8,5	71,4	13,2	Sumy	61,6	20,2	81,8	8,4
Zakarpattia	4,9	21	64,7	9,4	Ivano-Frankivsk	46,9	33,6	80,5	8
Zaporizhzhia	8	34,7	44,3	13	Luhansk	40,9	39,4	80,3	7,6
Ivano-Frankivsk	5,4	14,1	46,9	33,6	Rivne	50	29,9	79,9	7,2
Kyiv	6,4	18,9	47,5	27,2	Khmelnyskyi	41,7	37,8	79,5	6,8
Kyrovohrad	14,7	19	60,4	5,9	Chernivtsi	39,1	40,2	79,3	6,4
Luhansk	6,9	12,9	40,9	39,4	Donetsk	24,9	53,3	78,2	6
Lviv	4,3	22,1	53,4	20,2	Odesa	43,2	35	78,2	6
Mykolaiv	11	28,6	35,6	24,8	Vinnitsia	33,9	43	76,9	5,6
Odesa	7,8	13,9	43,2	35	Chernihiv	45	30,2	75,2	5,2
Poltava	15,9	19,6	40,9	23,5	Kyiv	47,5	27,2	74,7	4,8
Rivne	5,4	14,7	50	29,9	Zakarpattia	64,7	9,4	74,1	4,4
Sumy	3,2	14,9	61,6	20,2	Lviv	53,4	20,2	73,6	4
Ternopil	7	9,1	31,1	52,8	Cherkasy	30,6	40,9	71,5	3,6
Kharkiv	23,3	16,4	46,3	14,1	Kyrovohrad	60,4	5,9	66,3	3,2
Kherson	4,9	10,2	68,5	16,4	Kyiv City	49	16,2	65,2	2,8
Khmelnyskyi	5	15,5	41,7	37,8	Poltava	40,9	23,5	64,4	2,4
Cherkasy	18,5	10	30,6	40,9	Dnipropetrovsk	45,7	17,2	62,9	2
Chernivtsi	9,9	10,9	39,1	40,2	Mykolaiv	35,6	24,8	60,4	1,6
Chernihiv	5,8	19	45	30,2	Kharkiv	46,3	14,1	60,4	1,2
Kyiv City	12,1	22,6	49	16,2	Zaporizhzhia	44,3	13	57,3	0,8

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest rate of citizens satisfied with medical services obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data obtained from the “Health Index. Ukraine” study of 2019. The following evaluation categories were selected: “rather satisfied” and “completely satisfied”<sup>69</sup>.

<sup>69</sup> Health Index. Ukraine, <http://health-index.com.ua>

**Table 16.** Percentage of those who consulted a doctor during an illness that occurred during the last 12 months, ("Health Index. Ukraine", 2019)

Table 16.1				Table 16.2		
Percentage of those who consulted a doctor during an illness that occurred during the last 12 months				Percentage of those who consulted a doctor during an illness that occurred during the last 12 months		
Region	Had health issues during the last 12 months	Of them, consulted a doctor for medical assistance		Region	Had health issues and consulted a doctor for assistance (%)	Score
	2019	Yes	No			
Vinnitsia	54,4	74,9	25,1	Volyn	85,2	10
Volyn	37,3	85,2	14,8	Ternopil	84,4	9,6
Dnipropetrovsk	47,7	58,5	41,5	Ivano-Frankivsk	82,9	9,2
Donetsk	42,4	67,7	32,3	Khmelnyskyi	80,3	8,8
Zhytomyr	65,9	61,1	38,9	Chernivtsi	75,6	8,4
Zakarpattia	19,1	75,4	24,6	Zakarpattia	75,4	8
Zaporizhzhia	48,7	60,5	39,5	Vinnitsia	74,9	7,6
Ivano-Frankivsk	32,5	82,9	17,1	Rivne	74,7	7,2
Kyiv	41,6	71,3	28,7	Kyrovohrad	71,8	6,8
Kyrovohrad	28,6	71,8	28,2	Kyiv	71,3	6,4
Luhansk	48,9	56,1	43,9	Chernihiv	69,8	6
Lviv	50,9	58,3	41,7	Kyiv City	69,1	5,6
Mykolaiv	62,8	45,9	54,1	Donetsk	67,7	5,2
Odesa	40	58	42	Cherkasy	65	4,8
Poltava	58,6	46,5	53,5	Kherson	64,6	4,4
Rivne	25,9	74,7	25,3	Kharkiv	61,5	4
Sumy	43	30,7	69,3	Zhytomyr	61,1	3,6
Ternopil	19,3	84,4	15,6	Zaporizhzhia	60,5	3,2
Kharkiv	43,7	61,5	38,5	Dnipropetrovsk	58,5	2,8
Kherson	47,6	64,6	35,4	Lviv	58,3	2,4
Khmelnyskyi	39,8	80,3	19,7	Odesa	58	2
Cherkasy	44,1	65	35	Luhansk	56,1	1,6
Chernivtsi	35,7	75,6	24,4	Poltava	46,5	1,2
Chernihiv	23,4	69,8	30,2	Mykolaiv	45,9	0,8
Kyiv City	55,5	69,1	30,9	Sumy	30,7	0,4



Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 25 unique absolute values of the indicator). The region with the highest number of those who consulted a doctor for medical assistance obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*Data obtained from the "Health Index. Ukraine" study of 2019.<sup>70</sup>

<sup>70</sup> Health Index. Ukraine, <http://health-index.com.ua>

**Table 17.** Percentage of signed declarations on the provision of primary health care from the total population of the region, (as of May, 2020)

Region	Number of signed declarations on the provision of primary health care, mln. (as of May 18, 2020)	Their percentage from the total population of the region	Score
<b>Vinnytsia</b>	1,32	85,6	10
Kyiv	1,51	84,7	9,6
Volyn	0,87	84,4	9,2
Khmelnyskyi	1,05	83,8	8,8
Lviv	2,08	82,9	8,4
Sumy	0,8837	82,9	8,4
Zhytomyr	1	82,9	8,4
Poltava	1,14	82,3	8
Rivne	0,9476	82,2	7,6
Chernihiv	0,8078	81,7	7,2
Ivano-Frankivsk	1,11	81,2	6,8
Ternopil	0,8386	80,8	6,4
Kharkiv	2,1	79,1	6
Zakarpattia	0,9895	78,9	5,6
Dnipropetrovsk	2,5	78,8	5,2
Zaporizhzhia	1,32	78,4	4,8
Chernivtsi	0,7055	78,3	4,4
Kherson	0,7946	77,6	4
Cherkasy	0,9053	76,1	3,6
Kyrovohrad	0,6921	74,3	3,2
Mykolaiv	0,8241	73,7	2,8
Odesa	1,62	68,2	2,4
Kyiv City	2,02	68,1	2
Donetsk	1,36	33	1,6
Luhansk	0,479	22,5	1,2

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 24 unique absolute values of the indicator). The region with the highest rate of signed declarations on the provision of primary health care obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. \*In order to calculate the share of signed declarations relative to the total population used data of the State Statistics Service on the total population of the regions as of March 2020 <sup>71</sup>. Data for signed declarations provided according to the National Health Service of Ukraine <sup>72</sup>.

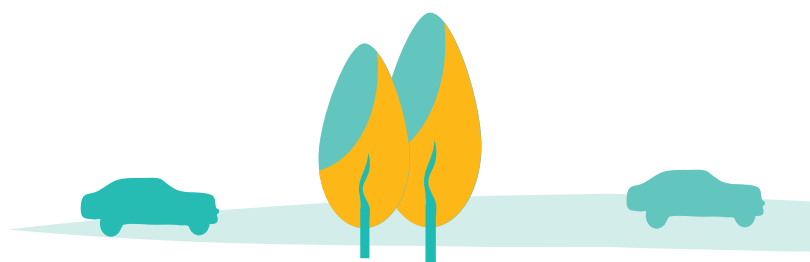
<sup>71</sup> State Statistics Service of Ukraine, <http://www.ukrstat.gov.ua>

<sup>72</sup> National Health Service of Ukraine, <https://nszu.gov.ua/e-data/dashboard/elektronna-karta-misc-nadannya-pervinnoyi-mediko-sanitarnoyi>

**Table 18.** Mortality rate from traffic accidents per 100 thousand population in 2018

Region	Mortality rate from traffic accidents per 100 thousand population	Score
<b>Kyiv City</b>	6,8	10
Sumy	7,3	9,6
Ivano-Frankivsk	8,6	9,2
Kharkiv	8,8	8,8
Kyrovohrad	9	8,4
Dnipropetrovsk	9,4	8
Poltava	9,5	7,6
Zaporizhzhia	9,6	7,2
Ternopil	9,8	6,8
Mykolaiv	10	6,4
Vinnytsia	10,2	6
Chernivtsi	10,5	5,6
Kherson	10,6	5,2
Khmelnyskyi	10,7	4,8
Zakarpattia	11,4	4,4
Rivne	11,6	4
Cherkasy	12	3,6
Volyn	12,2	3,2
Chernihiv	12,3	2,8
Lviv	12,7	2,4
Odesa	12,8	2
Zhytomyr	13,7	1,6
Kyiv	14,9	1,2
Donetsk	–	0,8
Luhansk	–	0,8

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 24 unique absolute values of the indicator). The region with the lowest number of deaths per 100 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. Data provided according to the information of the State Statistics Service for 2018<sup>73</sup>.



<sup>73</sup> Population of Ukraine in 2018, demographic yearbook, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

**Table 19.** Mortality rate from circulatory system diseases per 100 thousand population in 2018

Region	Mortality rate from circulatory system diseases per 100 thousand population	Score
<b>Kyiv City</b>	694,2	10
Zakarpattia	751,7	9,6
Lviv	803,4	9,2
Volyn	891,4	8,8
Ivano-Frankivsk	900,8	8,4
Rivne	901,1	8
Chernivtsi	907,4	7,6
Odesa	916,4	7,2
Kherson	945,7	6,8
Khmelnytskyi	946,5	6,4
Kyrovohrad	1012,9	6
Zaporizhzhia	1014,7	5,6
Ternopil	1037,4	5,2
Mykolaiv	1049,7	4,6
Sumy	1086,6	4,4
Dnipropetrovsk	1091,2	4
Kharkiv	1112,3	3,6
Vinnytsia	1132,5	3,2
Kyiv	1143,8	2,8
Cherkasy	1153,4	2,4
Zhytomyr	1166,9	2
Poltava	1190,6	1,6
Chernihiv	1410,8	1,2
Donetsk	-	0,8
Luhansk	-	0,8

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 24 unique absolute values of the indicator). The region with the lowest number of deaths per 100 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. Data provided according to the information of the State Statistics Service for 2018<sup>74</sup>.

**Table 20.** Mortality rate from tumors per 100 thousand population in 2018

Region	Mortality rate from tumors per 100 thousand population	Score
<b>Volyn</b>	149,2	10
Zakarpattia	150,6	9,6
Ivano-Frankivsk	160,5	9,2
Rivne	164,7	8,8
Chernivtsi	170,6	8,4
Lviv	173,3	8
Ternopil	177,5	7,6
Mykolaiv	182,8	7,2
Kyiv City	187,7	6,8
Zhytomyr	191,0	6,4
Vinnytsia	197,2	6
Kherson	199,2	5,6
Odesa	200,0	5,2
Chernihiv	201,8	4,8
Khmelnytskyi	204,6	4,4
Kyrovohrad	211,0	4
Kharkiv	216,2	3,6
Cherkasy	218,9	3,2
Kyiv	223,8	2,8
Poltava	226,3	2,4
Dnipropetrovsk	231,2	2
Sumy	234,4	1,6
Zaporizhzhia	263,9	1,2
Donetsk	-	0,8
Luhansk	-	0,8

Indicator weight is 10 points. The increment between scores is 0.4 points (calculated using the formula, where increment = 10 points / 24 unique absolute values of the indicator). The region with the lowest number of deaths per 100 thousand population obtained the highest score, and each subsequent region in the ranking was rated 0.4 points lower. Data provided according to the information of the State Statistics Service for 2018<sup>75</sup>.

<sup>74</sup> Population of Ukraine in 2018, demographic yearbook, [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2019/zb/12/zb\\_ukr\\_2018.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2019/zb/12/zb_ukr_2018.pdf)

<sup>75</sup> Ibid