



**PUBLIC HEALTH CENTER
OF THE MOH OF UKRAINE**

Tuberculosis in Ukraine

Analytical and Statistical Reference Book

The State Institution «Public Health Center of the Ministry of Health of Ukraine»

The State Institution «Center for Medical Statistics of the Ministry of Health of Ukraine»

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Acronyms

ART	antiretroviral therapy
ARV drugs	antiretroviral drugs
BSC	biosafety cabinet
DOT	directly observed treatment
DR-TB	drug-resistant TB
DST	drug susceptibility testing
EQC	external quality control
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
HCF	health care facilities
HIV	human immunodeficiency virus

IC	infection control
II	intensive indicator
MDR-TB	multidrug-resistant TB
MGM	molecular genetic method
MOH of Ukraine	Ministry of Health of Ukraine
NGO	non-governmental organization
PCR	polymerase chain reaction
PHC	SI «Public Health Center of MOH of Ukraine»
PTI	prophylactic treatment with isoniazid
Register	register of TB patients
SPSU	State Penitentiary Service of Ukraine
TB	tuberculosis
TB drugs	anti-tuberculosis drugs
TBD	TB dispensary
TBF	TB facilities
URCS	Ukrainian Red Cross Society
WHO	World Health Organization
XDR-TB	extensively drug-resistant tuberculosis



TB Control Strategy in the World

In May 2014, the World Health Assembly (Geneva, Switzerland) endorsed the Global End TB Strategy for 2016-2035 which summarizes the Global «Stop TB» Plan implementation, that was developed by the WHO Strategic Working Group on TB, agreed by all WHO member-states, and was implemented from 2005 through 2015; its goal was to overcome the existing barriers in TB, MDR-TB and TB/HIV co-infection control.

Although the number of TB deaths has decreased by 22% since 2000, the disease remains one of the top ten causes of mortality worldwide. India, Indonesia, China, Nigeria, Pakistan and South Africa are included into the list of countries with high TB prevalence rate (60% of new cases of infection per year). In addition, 480,000 cases of MDR-TB and 100,000 cases of rifampicin-resistant TB (Rif-TB) were registered in the world. The new Strategy approval is aimed at elimination of tuberculosis, as one of the public health problems.

The main objective of the new Global WHO Strategy is to end TB in the world by 2035, and to achieve a zero rate of incidence, mortality, and suffering from this disease.

The target indicators for achieving the goal, as a part of the new Strategy, are to decrease TB morbidity to less than 10 cases per 100,000 population, decrease TB deaths number by 95% (compared to 2015), decrease TB incidence rate by 90% (compared to 2015). None of the affected families should bear the catastrophic costs associated with TB.

The current global tendency in tuberculosis is characterized by decreasing TB morbidity by 1.5% at the average annual rate.

Achieving this goal should be based on the introduction of three key elements of the strategy. The first element is the optimal use of existing and new drugs, ensuring public access to health care and social protection. This element implementation will allow to decrease TB incidence rate at the average of 10% annually by 2025.

The second element is new preventive actions and new treatment regimens implementation, and ensuring diagnostics immediately at the facility where health care is provided. Owing to this, the incidence rate will decrease at the average of 17% per year by 2025.

The political will of the state, integrated and patient-centered TB care, disease prevention and applying systems that support strengthening of research and innovation, as the third element of the strategy implementation, will make real the ultimate goal of the strategy – to end the global TB epidemic in the world by 2035.

The End TB Strategy consists of the three components: comprehensive, patient-centered care and disease prevention, decisive political actions and supportive advocacy, strengthened research and innovation.

Patient-centered comprehensive treatment and disease prevention include:

- A.** TB contacts and high-risk population on-going screening.
- B.** Early diagnostics of all TB forms and overall access to DST, including use of rapid tests.
- C.** Overall access to quality treatment and the whole range of care services for all patients with TB, including its drug-resistant forms, and providing patients with support to develop their adherence to treatment.
- D.** Joint efforts to counter TB/HIV co-infection and concomitant diseases management.
- E.** Latent TB infection treatment and high-risk groups representatives preventative treatment, as well as vaccination against TB.

Decisive political actions and supportive advocacy include:

- A.** Political commitment followed by provision of adequate resources, including the policy of overall health care services coverage.
- B.** Strengthening all functions of health care systems, including well-coordinated mechanisms of TB control funding, and ensuring human resources.
- C.** Legislative regulations for epidemiological surveillance based on personal data, improving the quality of civil status registration, efficient drugs usage and pharmacovigilance.
- D.** Infection control of airborne infections, including administrative and engineering controls, as well as personal protection measures in all relevant health care facilities and congregated settings.
- E.** Community systems and participation in the work of civil society representatives.
- F.** Social protection, poverty reduction and addressing other TB determinants, such as migration and imprisonment.

Strengthening of research and innovation:

- A.** Discovery, development and immediate introduction of new medicine, interventions and strategies implementation.
- B.** Scientific research to improve program implementation and impact, and promote innovations.

The End TB Strategy will be implemented in several stages. The following indicators of the first stage implementation efficiency are planned (by 2020):

- ▶ TB mortality decrease by 35% (vs. 2015)
- ▶ TB incidence rate decrease by 25% (<85 per 100,000)
- ▶ treatment success rate in the cohort of MDR-TB patients should be, at least, 75%.

To achieve the strategic goals of the second stage implementation (by 2025) it is expected to:

- ▶ decrease TB mortality by 75% (vs. 2015)
- ▶ decrease TB incidence rate by 50% (<55 per 100,000)
- ▶ eliminate catastrophic costs associated with TB for any of the affected families.

The final target milestones by 2035 are:

- ▶ TB mortality decrease by 95% (vs. 2015)
- ▶ TB incidence rate decrease by 90% (<10 per 100,000)
- ▶ no catastrophic costs associated with TB for any of the affected families.

Strategic Directions for the European Region

Despite the significant achievements in TB, TB/HIV and MDR-TB control in the WHO European Region, our region has the highest MDR-TB burden in the world and only half of such patients complete their treatment successfully. That is why, in accordance with the Global End TB Strategy and the European Policy Framework for the 21st century – Health 2020 Program, TB Control Action Plan for the WHO European Region for 2016-2020 was developed. The plan was approved at the 65th session of the WHO European Regional Committee in Vilnius, Lithuania, on September 25, 2015.

The main strategic directions of the Roadmap for the implementation of the TB Action Plan in the WHO EURO Region are as follows:

1. Elimination of tuberculosis through strengthening health care system activities on TB and MDR-TB prevention, control and treatment.
2. Promotion of cross-sectoral cooperation to address social determinants and the main risk factors for spreading TB.

- 3.** Work within national, regional and international multilateral partnerships, including civil society organizations and community representatives.
- 4.** Promotion of cooperation to develop and use new diagnostic tools, drugs, vaccines and other medical and preventive actions.
- 5.** Promotion of the available resources efficient usage, identifying gaps and mobilizing additional resources to ensure sustainable TB prevention activities implementation.
- 6.** Ensure the justified observance of ethics principles, human rights and social justice with regards to TB patients was integrated into all the listed above areas of strategic interventions.

This plan implementation, by estimate, will allow to save 1,089,308 lives, save \$13,805 per person by preventing TB deaths and save \$657 per person annually by preventing disability. The estimated overall program implementation efficacy is \$48 billion.



Ukraine in the Context of Fulfilling International Commitments to Counter TB Epidemic

Fighting TB in Ukraine is one of the state policy priorities in the health care and social development area, and the subject of the international commitments. In 2014, Ukraine first was included into the list of the five countries with the highest MDR-TB burden in the world. Patients failure to seek for health care timely and late TB, TB/HIV co-infection detection, that results in high TB mortality rate and is the consequence of the lack of integrated approach to combining preventive and treatment programs into the unified effective system of fighting TB at the national and regional levels, are particularly threatening.

In social and economic crisis, deepening due to the military conflict in the east of the country, the deterioration of TB epidemiological situation is prognosed, which will require additional managerial procedures and financial expenses.

According to WHO experts assessment, over the past five years there has been a tendency in Ukraine towards TB morbidity and mortality rate decrease; TB diagnostics laboratory network has been optimized and up-to-date rapid methods of TB diagnostics and EQC system have been implemented; MDR-TB diagnostics has been significantly improved; standards on TB, TB/HIV co-infection and MDR-TB case management have been put into practice; collaboration on combating TB/HIV co-infection has been enhanced; coordination between Centers for AIDS Prevention and Control (hereinafter referred to as 'AIDS Centers') and TB facilities has been established; basis for TB infection control measures implementation has been established and TB patients register has been introduced.

In order to improve quality of health services for TB, TB/HIV and MDR-TB patients, and ensure trained, skilled personnel for TB service and regional AIDS centers, regular training of health care workers is provided, based on the consolidated efforts of the Ministry of Health of Ukraine, national and international partners (PHC, grantees of the Global Fund to Fight AIDS, Tuberculosis and Malaria (hereinafter – the Global Fund), USAID projects and other partners).

In virtue of the joint efforts of health care workers and NGOs, coordinated by the Ministry of Health of Ukraine and PHC, early TB detection among high-risk groups was implemented, and socially vulnerable groups of population (prisoners, patients with HIV/AIDS) are provided with TB drugs.

A draft National TB Control Program for 2017-2021 is developed to persistently address the TB problem in Ukraine. The main components of the new program are in line with the overall European approach. Ukraine will continue to implement patient-centered health care provision models, reform the TB service within the concept of the general health care reform, and refine financial expenses in line with current epidemic trends, implement new diagnostics tools and approaches to treatment according to the WHO recommendation.

During 2001-2015, the Global Fund provided Ukraine with over 463 million dollars to implement TB and HIV/AIDS control programs. However, changes in the Global Fund approaches to resources allocation for recipients require Ukraine's willingness and ability to increase its own state funding to replace external financing.

The sustainability and achievements in health care, received in the course of TB and HIV/AIDS control programs implementation, will be jeopardized

without careful planning and effective implementation of measures to ensure the transition to government funding of the services. It is confirmed by the recent assessment results of the country's readiness to switch to government funding of TB and HIV/AIDS services. The assessment also helped to identify the critical areas that will need to be addressed in the near future to ensure a sustainable national response to the epidemic.

To coordinate the state policy in the area of TB and HIV/AIDS control, provide medical and social care to patients with TB, HIV and TB/HIV co-infection, prevent diseases and ensure the services provision at the expense of budget funds, «Strategy to Ensure a Permanent Response to TB Epidemic, Including Drug-Resistant TB and HIV/AIDS, for the Period up to 2020» was developed, approved and endorsed by the Cabinet of Ministers of Ukraine Decree No. 248-r, dated 22.03.2017, and the action plan for its implementation was approved.

The goal of the strategy is to strengthen the state's capacity to effectively implement the priority measures to overcome TB and HIV/AIDS epidemics without termination of such activities or their implementation quality impairment in the context of gradual transition, starting from 2017, from donor financing (mainly by the Global Fund) to the national and local budgets financing.

The Strategy implementation is aimed at achieving the following results:

- ▶ Improvement of the state policy on TB and HIV/AIDS control in accordance with the public health principles and international standards;
- ▶ Improvement of the management system, increasing the activities coordination efficiency at the national level to counter TB and HIV/AIDS;
- ▶ Reducing the level of dependence on external financing of TB and HIV/AIDS programs, efficient use of the available resources;
- ▶ Facilitating international technical assistance fundraising;
- ▶ Optimization of services provision, in particular, by expanding the coverage, ensuring continuity and coordination of care provision, improving its quality;
- ▶ Appropriate and continuous staffing;
- ▶ Improvement of staff training system on TB and HIV/AIDS control;
- ▶ Improvement of monitoring and evaluation, evidence-based policy planning and implementation;

- ▶ Reducing the level of stigma and discrimination of people living with HIV, TB patients, TB and HIV high risk groups representatives;
- ▶ Strengthening administrative and procurement capacity of the MOH, Public Health Center of MOH and local health care authorities;
- ▶ Ensuring active participation of public associations, representatives of TB and HIV high risk groups in the TB and HIV/AIDS control programs implementation.

The Strategy implementation will ensure achieving the target indicators of the WHO Comprehensive Action Plan on TB Control in the European Region for 2016-2021.



Ukraine in the Context of Public Health Reform

The Ministry of Health of Ukraine developed the National Health Care Reform Strategy in Ukraine (hereinafter referred to as 'the Strategy') and the Concept of Health Care Financing Reform. The proposed Strategy is a part of the National Action Plan for Reforming, which was proclaimed by the Decree of the President of Ukraine No. 5/2015, dated 12.01.2015, «On Sustainable Development Strategy 'Ukraine-2020'» and the Government of Ukraine (the program of the Cabinet of Ministers of Ukraine activity approved by the resolution of the Parliament of Ukraine No. 26-VIII, dated 11.12.2014).

The ideas outlined in the Strategy should be incorporated in a series of practical actions, from government initiatives and draft legislation to civil society projects, including those related to the TB service.

The reform of the TB service is a part of the overall health care system reform.

The existing TB care system with excessive number of TB beds, and focused mainly on inpatient treatment, does not correspond with modern international practices, it is economically burdensome, and it does not allow to provide population, especially vulnerable groups, with accessible and quality services for TB prevention, detection, diagnostics and treatment.

The first step to develop further plans for outpatient treatment models implementation was the approval of the Order of the Ministry of Health of Ukraine No. 1169, dated 31.12.2013, «On Approval of the Action Plan to Meet the Special Condition of the Global Fund to Fight AIDS, Tuberculosis and Malaria as a Part of Round 9 Grant under the 'Tuberculosis' Component», according to which six pilot sites were identified to develop practical recommendations for the outpatient treatment models implementation (Donetska, Dnipropetrovska, Vinnytska, Khersonska, Poltavaska oblasts and Kyiv City).

At the regional level, the outpatient treatment models implementation was authorized in all pilot regions (orders of health care departments, meetings resolutions, etc.).

One of the components of the TB service reform is the integration of TB control activities into the primary and secondary health care networks, AIDS centers, other executive bodies and services, etc.

To this effect, the MOH of Ukraine Order No. 620, dated 04.09.2014, «On Approval and Introduction of Medical and Technological Documents on Standardization of Medical Care in the Event of Tuberculosis», by which «The Unified Clinical Protocol 'Tuberculosis'» was approved, determined operations for a therapist with regard to primary, secondary and tertiary medical care provision depending on the facility level. Thus, the legislative regulations have been created for the extensive involvement of the primary health care network specialists in TB case management.

The existing TB care system, focused mainly on inpatient treatment, does not correspond with modern international practices, it is economically burdensome and prevents from providing population, especially vulnerable groups, with accessible and quality services for TB prevention, detection, diagnostics and treatment. To reduce the number of TB patients on the inpatient treatment, as well as its duration, the criteria for TB patients hospitalization was thoroughly defined («The Unified clinical protocol 'Tuberculosis'», MOH of Ukraine Order № 620, dated 09.04.2014). In addition, the information on hospitalization was added to the TB register for executing analysis and control over compliance with the treatment protocol requirements.

During the second half of 2015, in one of the districts of Kryvyi Rih, the USAID funded project «Strengthening TB Control in Ukraine» together with the

specialists of the Municipal Institution «Kryvyi Rih TB Dispensary No. 2» conducted a pilot study «TB and TB/HIV Outpatient Treatment Models Implementation in the Industrial City».

Also, an operational research «The Impact of Different TB Outpatient Treatment Models on the Treatment Outcomes in Kyiv City» was conducted with the support of the USAID funded project «Strengthening TB Control in Ukraine» and with the involvement of experts from the School of Public Health of the National University «Kyiv-Mohyla Academy».

On April 21, 2016, a meeting «Strategy Implementation for TB Outpatient Treatment System Development in Ukraine» was held at MOH, it was organized by SI «Ukrainian Center for Socially Dangerous Disease Control of MOH of Ukraine» with the support of the WHO CO in Ukraine, International Charitable Foundation «Alliance of Public Health», USAID project «Strengthening TB Control in Ukraine», «Healthcare Financing and Management» project, and with the participation of the pilot sites representatives, where the outpatient treatment models were implemented. Upon the meeting completion, it was agreed to take into account the results of the outpatient models implementation for the further TB outpatient treatment system development within the implementation of the National Target Social Program to Fight TB in 2017-2021.

Prospects for the transition to outpatient treatment were discussed at the round table meeting in the Parliamentary Committee on November 11, 2016, where the representatives of MOH of Ukraine, SI «Public Health Center of MOH of Ukraine» and other stakeholders participated.

Due to the work done to optimize bed capacity of specialized TB facilities that provide inpatient care to TB patients, 1,451 beds were cut down in 2016, which accounts for 9.1% of the number of respective beds in 2015. However, failure of the health care finance system reform hinders the further cutting down of the excessive number of TB beds.

To discuss activities coordination on health care reform implementation in terms of TB control service provision, MOH of Ukraine set up a Steering Working Group on Health Care Reform Implementation with regards to TB control service provision in Ukraine.



The Structure of the TB Service in Ukraine

TB control activities and Strategy implementation are performed by the TB service of Ukraine, represented by TB dispensaries, TB hospitals for adults and children, TB stations in outpatient clinics.

Until November 2016, organizational and technical guidance of the country's health care workers and health managers activities was executed by SI «Ukrainian Center for Socially Dangerous Disease Control of MOH of Ukraine», and since November 01, 2016 – by SI «Public Health Center of MOH of Ukraine» (PHC), to ensure the proper management of health care provision for TB, TB/HIV and HIV patients.

PHC controls the implementation of the national TB and HIV programs, acting as the unitary coordination center in Ukraine for transferring data and information on these diseases. In its monitoring programs PHC pays a particular attention to strengthening connections with primary health care facilities and social services as the basis of the public health system.

The following divisions of PHC that coordinate activities to counter socially dangerous diseases are rapidly strengthening their capacity: monitoring and evaluation center; organization of medical care for HIV-infected people; organization of medical care for TB patients; procurement and supply management; the National reference laboratory for HIV/AIDS diagnostics with serology, immunology and virology departments.

In 2016, there were 80 TB dispensaries, including 65 dispensaries with inpatient departments (11,189 beds, in 2015 – 11,694 beds), where 40,196 patients were on the inpatient treatment during the year, including 17,039 of rural residents (in 2015 – 43,484 persons and 18,816 persons, respectively). The average number of bed occupancy days at TB dispensaries in 2016 was 277.8 days, the average stay on bed number was 79.3 days.

In addition, there were 28 TB hospitals for adults (in 2015 – 33 TB hospitals) with 3,202 beds (in 2015 – 4,085 beds), where 7,833 patients were on the inpatient treatment during the year, including 3,523 of rural residents (in 2015 – 9,914 persons and 4,420 persons, respectively). The average number of bed occupancy days per year was 238.7 days (in 2015 – 250 days), the average stay on bed number was 102.1 days (in 2015 – 103.5 days).

There is one TB dispensary with an inpatient department in each of the following oblasts – Vinnytska, Volynska, Zhytomyrska, Zakarpatska, Rivnenska, Mykolaivska, Khersonska, Khmelnytska, Cherkaska and in Kyiv City.

Bed occupancy level at TB dispensaries was 278 days, the average stay on bed number was 79.3 days (in 2015 – 286 days and 78.6 days, respectively).

Imprisoned TB patients treatment is organized at 8 specialized TB hospitals of the State Penitentiary Service of Ukraine. Three departmental specialized military hospitals subordinated to the Ministry of Defense of Ukraine provide inpatient care to patients with TB.

In total, there were 13,669 TB beds for adults in the country in 2016 (in 2015 – 15,100 beds), where 40,905 patients were on treatment (in 2015 – 46,187 patients).

Table 1. Bed occupancy indicators in the facilities of the Ministry of Health of Ukraine system

Indicator	Children			Adults		
	2014	2015	2016	2014	2015	2016
Average bed occupancy, days	260	276	254.3	283	272	268
Average stay on bed, days	77.8	78.1	83.5	90.4	89.4	92.4
Bed turn-over	3.3	3.5	3.05	3.1	3.0	2.9
Lethality	0.09	0.15	0.0	8.9	8.7	8.9
Beds availability for TB patients, per 10,000 people	1.26	1.18	1.25	1.18	3.55	3.78

Due to the bed capacity optimization in TB facilities and the outpatient TB treatment model implementation, 1,451 beds were cut down in 2016 (which accounts for 9.1% of the number of respective beds in 2015).

Figure 1. Number of beds for TB patients in HCFs of the MOH of Ukraine system

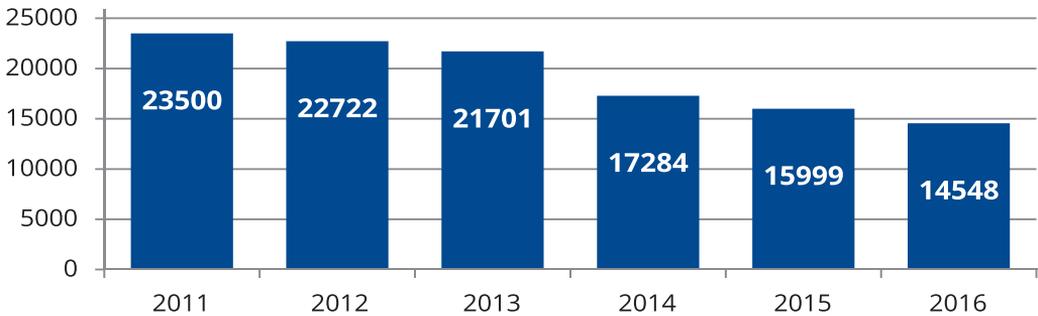
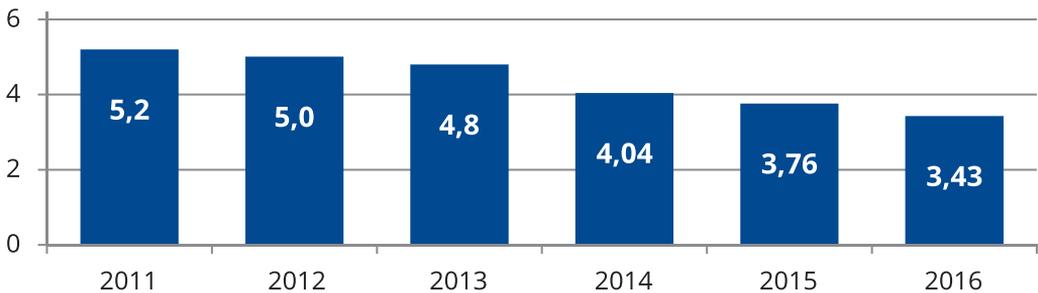
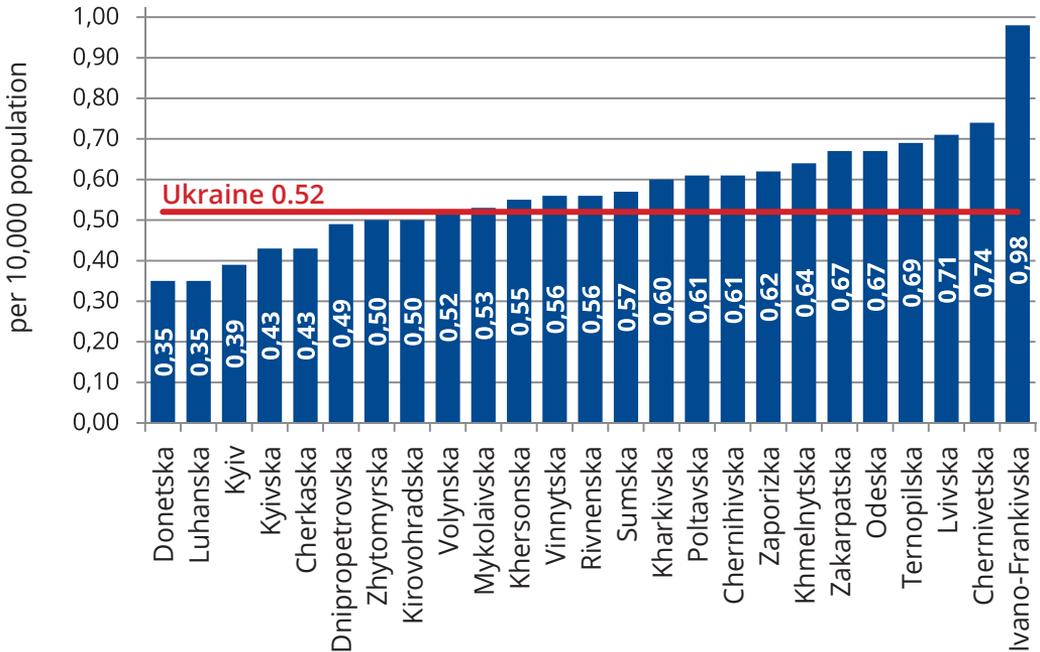


Figure 2. Beds availability for TB patients in HCFs of the MOH of Ukraine system, per 10,000 people



There were 2,792.5 of total TB specialists authorized staff at health care facilities of the MOH of Ukraine system in 2016 (in 2015 – 2,918.5), regular staff members – 2,421.75 (in 2015 – 2,521.00); individuals – 2,030 (in 2015 – 2,114). TB specialists staffing by individuals is 72.7% (in 2015 – 72.4%). The highest level of staffing by TB specialists at TB facilities is observed in Ternopil'ska oblast – 84.97%, the lowest – in Donetsk'ska oblast – 53.2%. TB specialists staffing level was 0.53 per 10,000 people (the absolute number of TB specialists is 2188, 75.9% of which are certified with a proficiency category). The highest TB specialists staffing level is in Ivano-Frankiv'ska oblast – 0.96, the lowest – 0.35 per 10,000 population – is in Luhans'ka and Donetsk'ska oblasts.

Figure 3. TB specialists staffing level at the facilities of the the MOH of Ukraine system (per 10,000 population)



One of the important components of TB control is TB facilities functioning, the condition of their infrastructure and logistics. In Ukraine, only about 30% of the specialized TB health care facilities have a satisfactory infrastructural and technical condition of buildings and premises.



TB Epidemic Situation in Ukraine,

as of 01.01.2017

According to the WHO, Ukraine remains a country with high rates of TB and MDR-TB burden.

TB epidemic is characterized by high multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB) prevalence, a relatively high mortality rate due to inadequate programmatic approach to DR-TB management and the growing number TB/HIV co-infection cases.

Ukraine is one of the 27 countries with MDR-TB burden. Despite the adoption of the STOP TB Strategy, as a part of the National TB Program (NTP), the Strategy components were not properly implemented. TB control activities funding mainly depends on the will and resources of oblast health care departments. The laboratory capacity is limited and the efforts to detect TB are directed primarily to mass screening of the general population. The priority is given to inpatient treatment and the appropriate treatment depends on the drugs provision at the local level. The principle of directly observed treatment (DOT) is followed unsatisfactorily, and the provided to patients support is limited.

To address the problems associated with TB spread in Ukraine, the country's health care system should be refocused from emergency care model to integrated disease management. TB care is funded according to the inflexible budget calculation methodology based on the three-year history of budget allocations and the number of occupied TB beds.

There is a need to shorten duration of TB patients hospitalization, while improving service provision at primary health care level, as well as infection control standards, and restructuring the financing system. MDR-TB control activities are inadequate, as well as efforts to combat TB/HIV co-infection. There is a shortage of TB drugs in the country due to poor management of their supplies and problems with procuring drugs of the guaranteed quality. The burden of socio-economic difficulties is aggravated by the political crisis and the war in eastern Ukraine. More than a million of internally displaced persons (IDPs) are scattered all over Ukraine requiring emergency care, including TB and TB/HIV co-infection treatment.

At present, countering the TB epidemic remains one of the state priorities. Despite the reduction of the TB epidemic process intensity, the risks of TB incidence increase still exists in the context of the current humanitarian crisis and hostilities in eastern Ukraine.

According to the WHO, the estimated TB prevalence and incidence in Ukraine since 2007 have had the tendency of decreasing annually at the average of 4.4% and 3.3% respectively.

Based on the WHO estimates, in 2016, TB incidence rate in Ukraine was 87 per 100,000 population, but according to routine surveillance, the incidence of new cases, along with relapses, since 2011 has been tending to decrease with an average annual decrease rate by - 2.9%. So, every year Ukraine fails to detect timely around 22.5% of TB cases that promotes further spread of TB among the population.

Figure 4. Estimated TB incidence and TB cases notification rate (new cases and relapses) in Ukraine, 1990-2016 (Data source: WHO report)

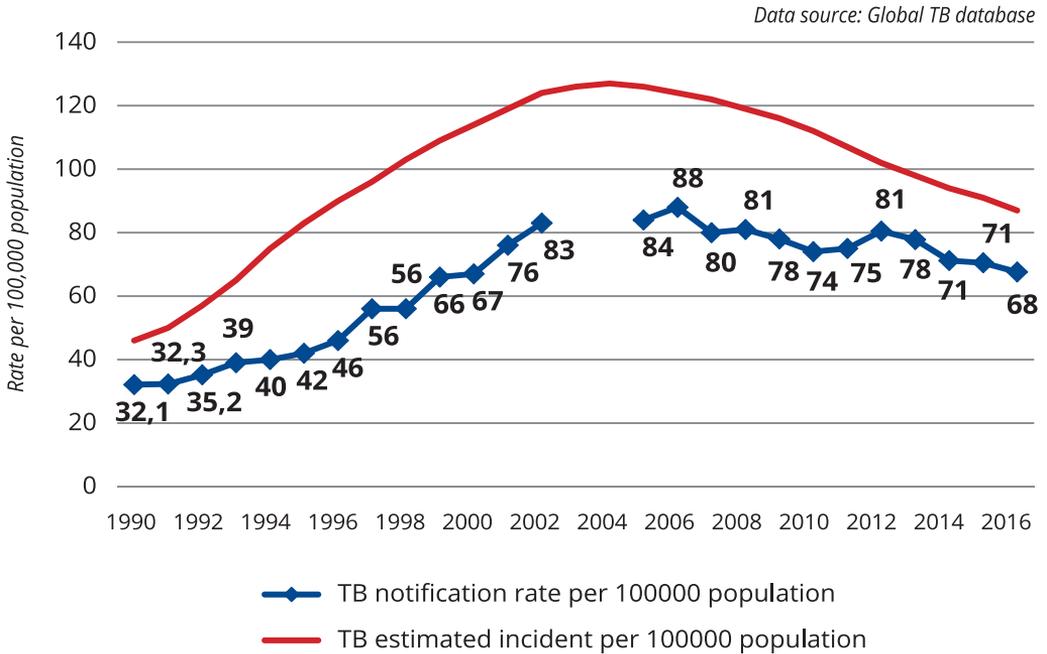
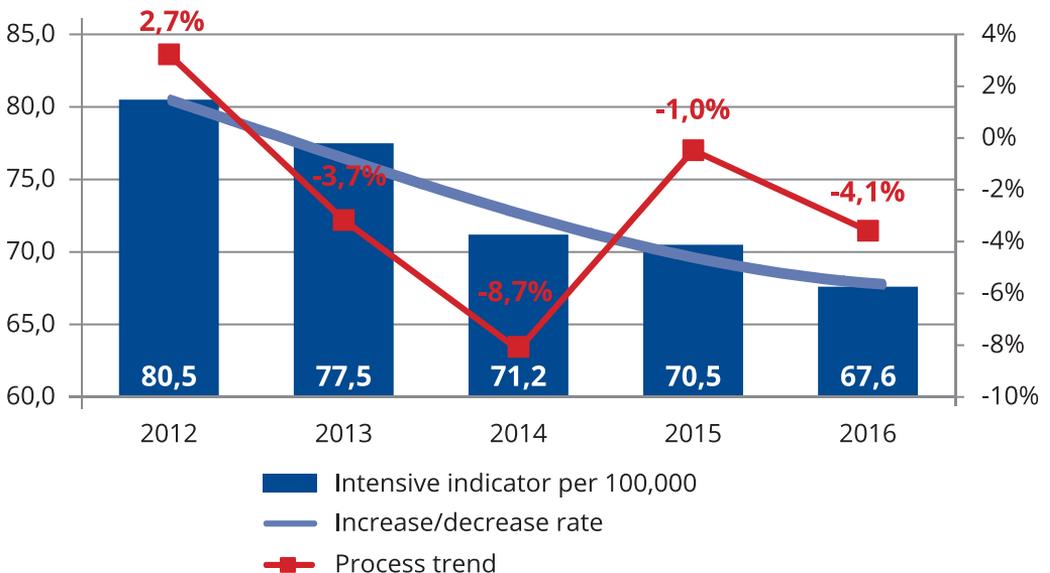


Figure 5. New TB cases incidence rate along with relapses for the period of 2012-2016 (in II per 100,000 population)



In 2016, TB incidence, including new cases and relapses, was 67.6 per 100,000 of total Ukraine's population; 28,800 cases were registered (in 2015 – 70.5 – 30,151 cases) – incidence rate decreased by 4,1%. In its structure, the incidence of new TB cases is 54.7 per 100,000 population (vs. 55.9 in 2015). The incidence rates calculation in Donetsk and Luhanska oblasts was done in 2016 only for the population of the territories controlled by the Government of Ukraine.

In some oblasts during this period, a tendency towards the increase of TB incidence (new cases + relapses) was noted:

Ternopilska	Odeska	Donetska	Zakarpatska	Kyivska	Vinnytska
14.2%	5.5%	4.4%	3.7%	3.6%	1.2%

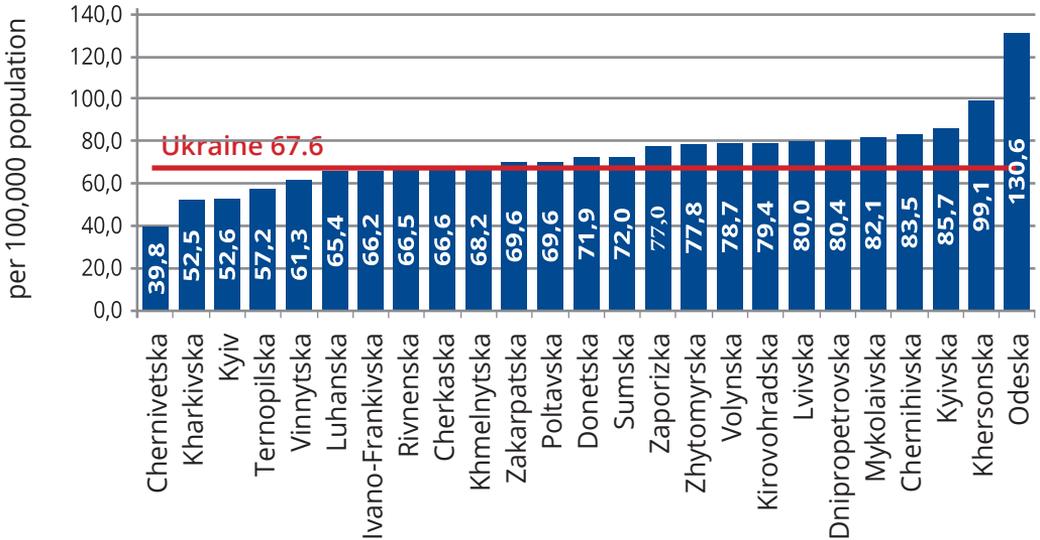
The situation in Luhanska oblast, where the average annual TB morbidity rate increase made up 45.8%, deserves special attention. This, above all, is due to active development of the TB service over the past two years in the territories under the control of the Government of Ukraine. The international technical assistance projects, in particular, Global Fund grant funding, play a significant role in improving TB detection in this area.

Figure 6. TB incidence, including new cases and relapses, Ukraine, 2016, per 100,000 population



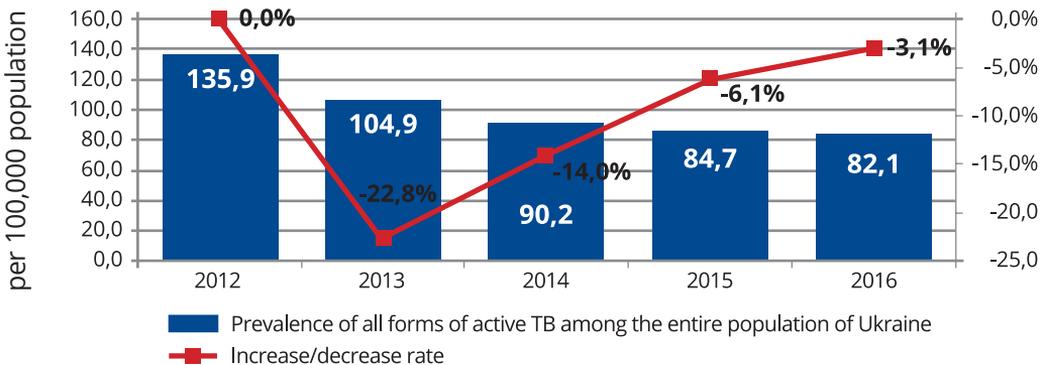
There is a significant fluctuation in TB incidence (from 39.8 to 130.6 per 100,000) in Ukraine’s regions. The highest TB incidence rates were registered in Odeska (130.6), Khersonska (99.1), and Kyivska (85.7) oblasts; the lowest – in Kharkivska (52.5), Chernivetska (39.8) oblasts and in Kyiv City (52.6).

Figure 7. TB incidence that includes new cases and relapses in the regions of Ukraine



As of 01.01.2017, 34,966 patients with all forms of active TB were registered at the TB facilities of the MOH of Ukraine system and are under medical supervision in health care facilities (in 2015 – 36,228). TB prevalence rate made up 82.1 per 100,000 population versus 84.7 in 2015 and became by 3.1% lower.

Figure 8. Prevalence of all forms of active tuberculosis among the entire population of Ukraine



The highest TB prevalence rates were registered in Odeska (157.5 per 100,000), Mykolaivska (130.3), Khersonska (115.0) and Dnipropetrovska (114.3) oblasts. Compared to 2015, the highest TB prevalence rate increase was in Odeska (by 15.2%), Luhanska (11.8%) oblasts. The highest TB prevalence rate decrease was in Chernivetska oblast (28%).

Figure 9. Prevalence of all forms of active tuberculosis in the regions of Ukraine

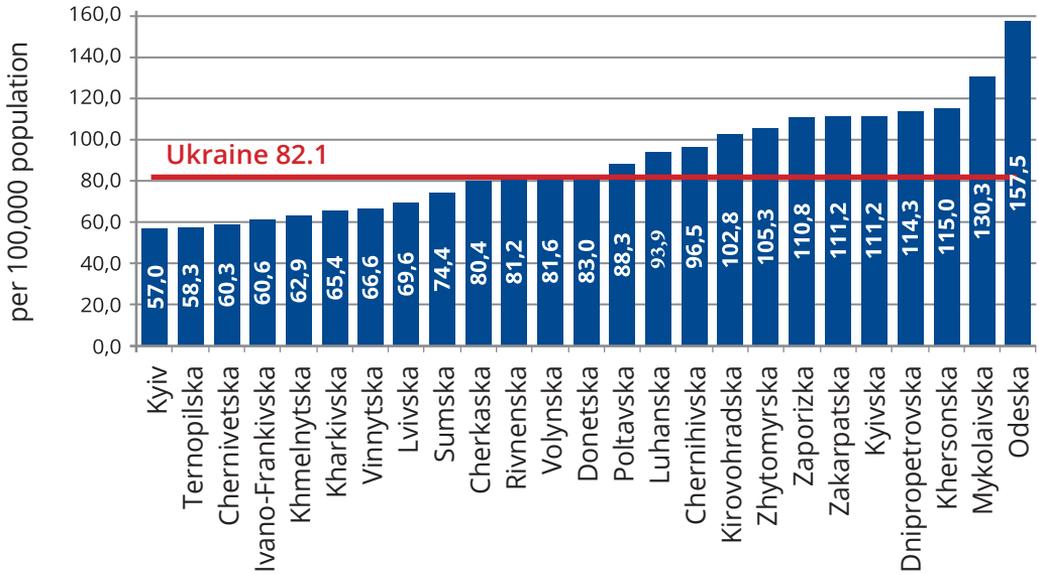


Figure 10. Dynamics of the main indicators (prevalence, morbidity and mortality)

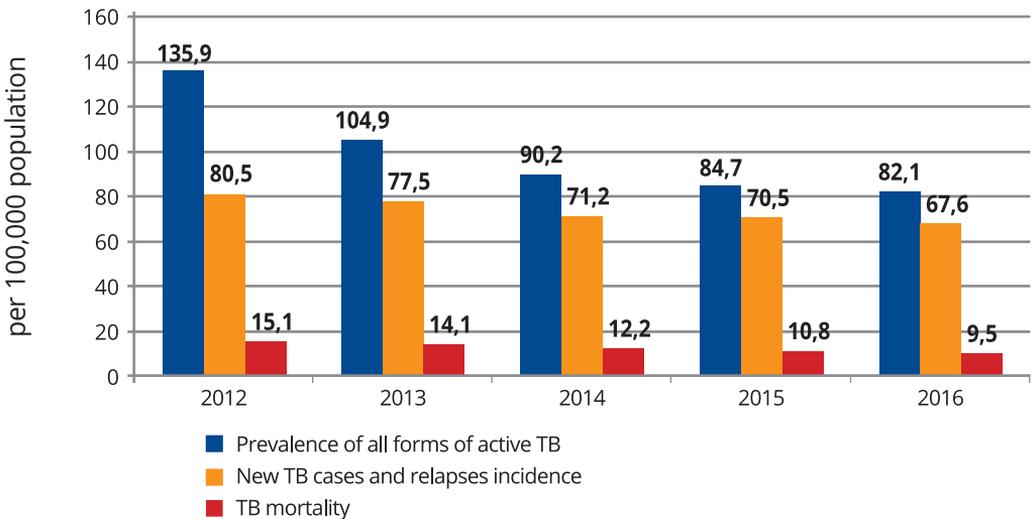
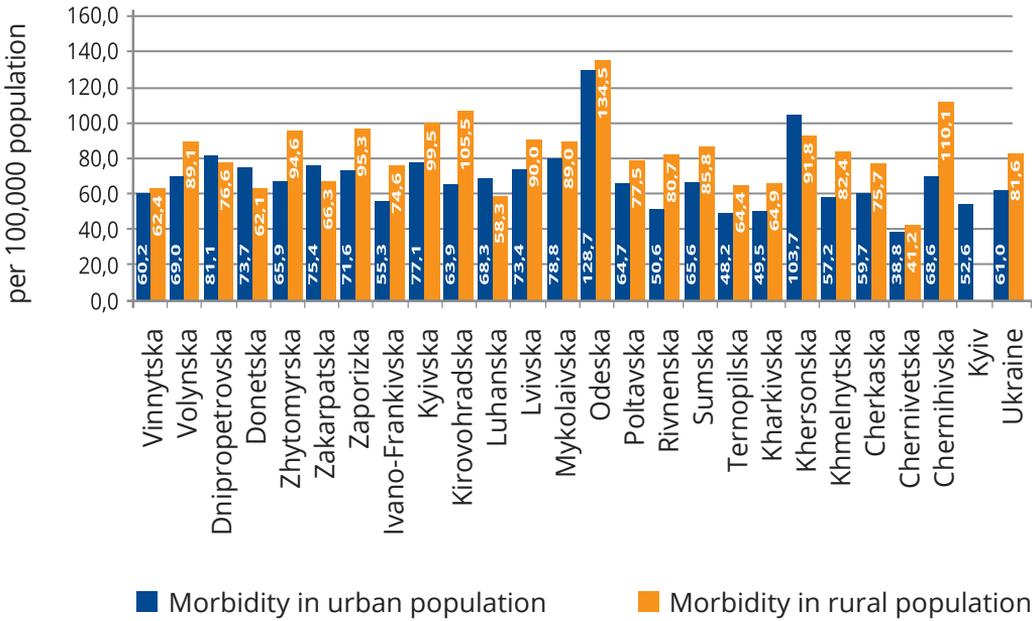
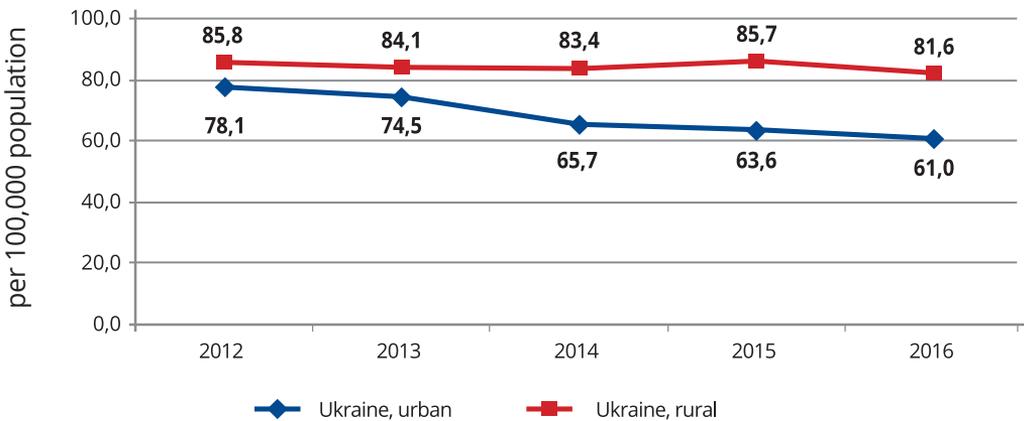


Figure 11. Breakdown of morbidity among urban and rural residents



In virtually all oblasts of Ukraine TB incidence (new cases and relapses) among rural residents is by 20-30% higher than that among urban residents (Chernihivska oblast – 38%). The exceptions are Dnipropetrovska, Zakarpatska and Khersonska oblasts, where TB incidence rate among urban residents is higher than that among rural population.

Figure 12. TB incidence rates among urban and rural residents



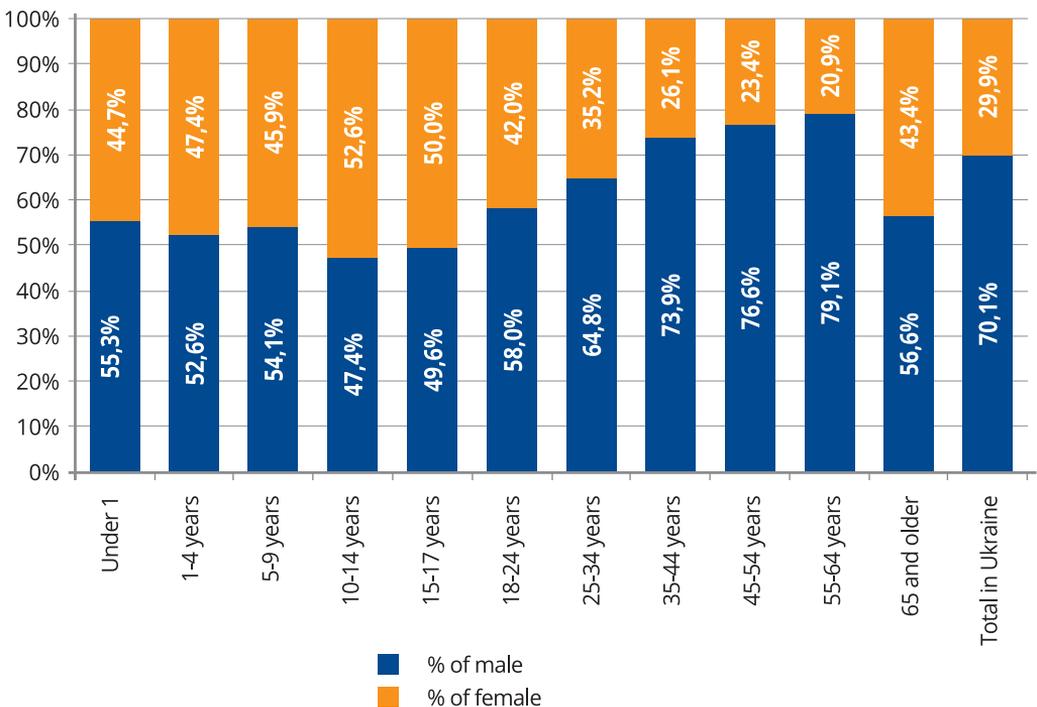
The incidence rate decrease among urban residents is higher than that among rural residents, which is the evidence of low access to TB detection and treatment services for rural population.

Over the past 5 years, TB incidence rate among men is 2-2.5 times higher than TB incidence rate among women.

The share of men constantly exceeds the share of women in the overall structure of TB morbidity. This tendency is observed in all age groups of the population.

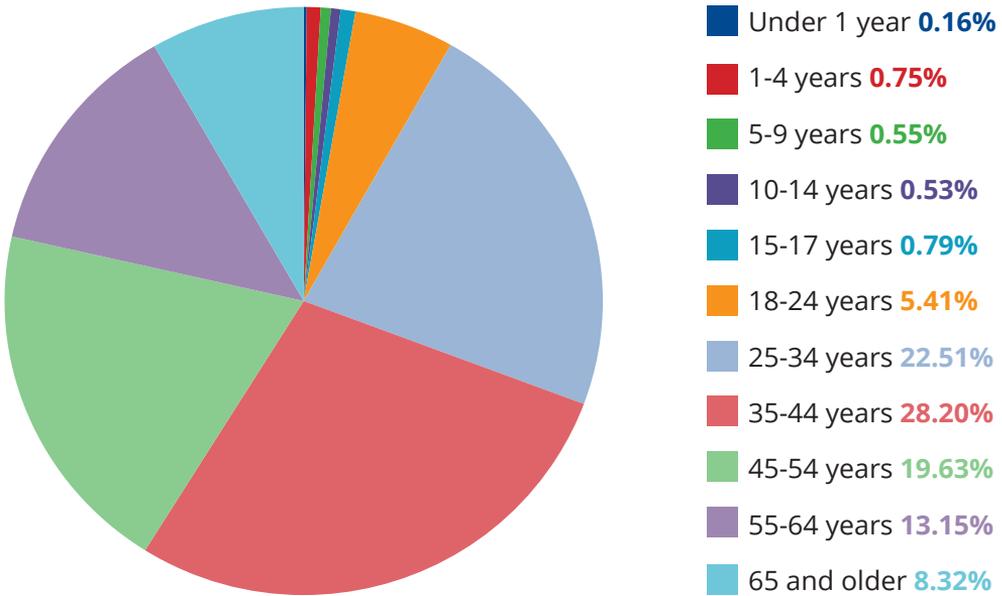
Among those patients, who contracted TB in 2016, men account for 70.1%, and the share of men in age groups in the overall patients' structure is growing.

Figure 13. Share of TB incidence among men and women in different age groups



One of the important epidemiological indicators of TB elimination success in the country is the trend of age structure of TB morbidity.

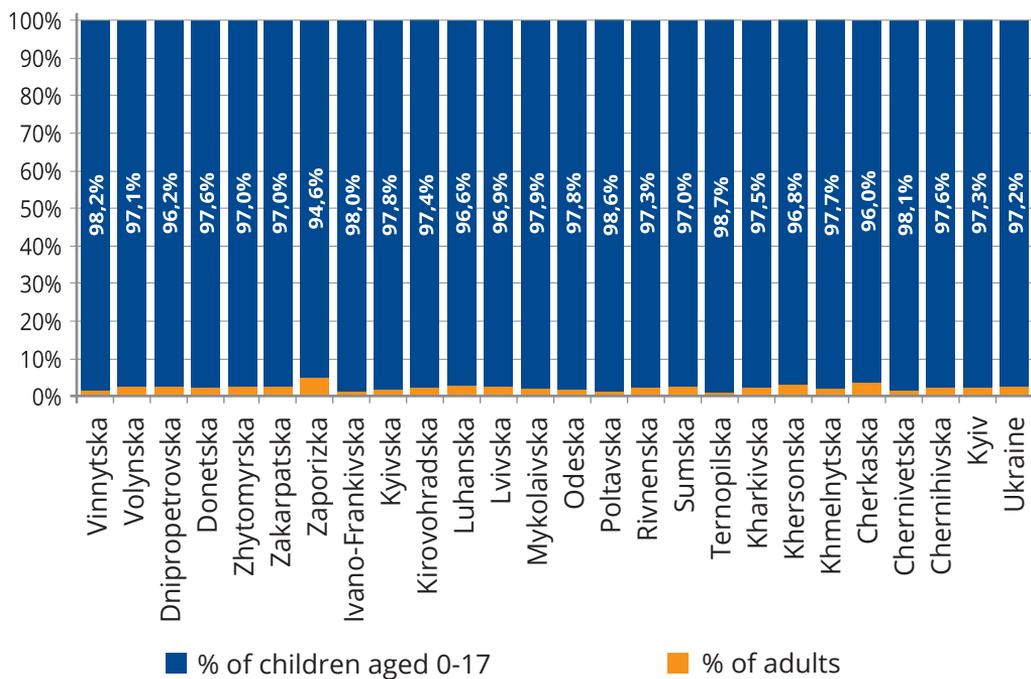
Figure 14. Age structure of TB cases



76% of persons who developed TB are of working age – from 18 to 54 years old, the age group of 25-44 years of age accounts for 50.7% of TB patients. These indicators are the evidence of TB morbidity high social significance, as well as of economic loss-making for the state due to TB. Losses are caused not only by patients treatment costs, but are also related the fact that a significant number of patients of working age fall out the production process for a long time.

If the average age of TB affected persons grows, this indicates positive changes in the epidemic process. The age structure analysis of TB incidence over the last 5 years shows a tendency towards a slow incidence decrease among the age group of 25-44 years old and a transition to a positive dynamics of TB epidemic. Population of this age category is the main work force of the country and the largest taxpayer, so it is obvious, this dynamics makes possible reducing the negative impact of TB epidemic on the country economic situation.

From 94.6% to 98.7% of the TB affected people were persons aged 18 years and older. The share of this age group is the highest in Poltavaska oblast – 98.6% and Ternopilska oblast – 98.7%.

Figure 15. Breakdown of TB incidence in age groups of the population (in percentage)

The indicator of the situation with TB is the incidence among children. In 2016, TB incidence rate among children aged 0-14 years remained at the level of the year 2015 – 8.8 per 100,000 children. TB incidence among adolescents (15-17 years old) decreased by 16.4%, from 23.4 to 20.4 per 100,000 population.

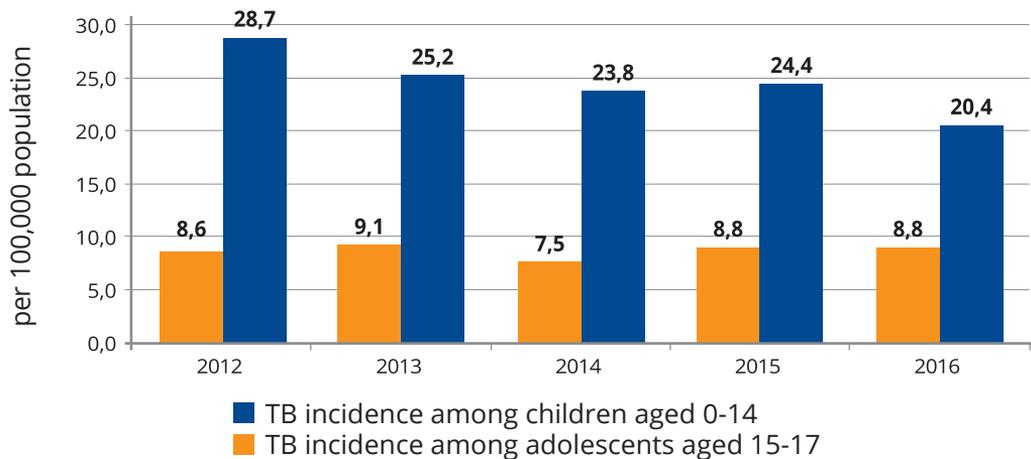
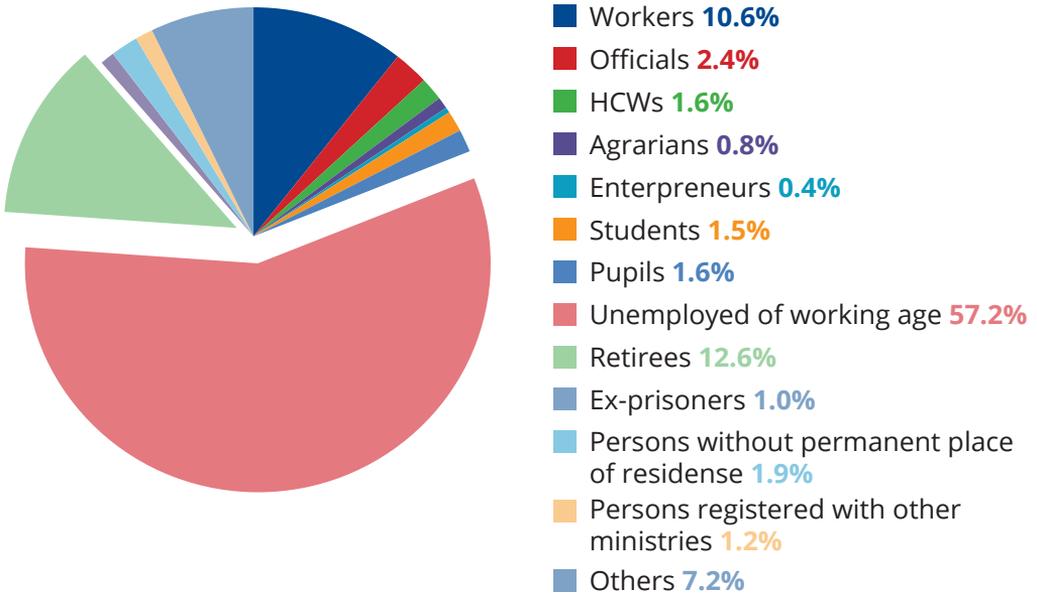
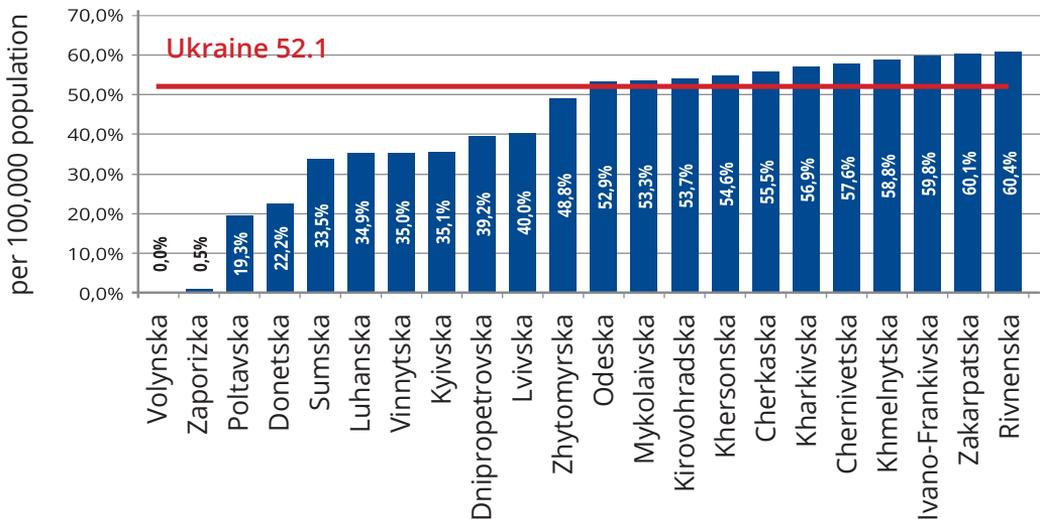
Figure 16. TB incidence among children aged 0-14 and 15-17 years

Figure 17. Social structure of new TB cases, 2016



The largest social risk group in terms of TB morbidity is the group of non-working population of working age. The largest share of the unemployed among persons who developed TB in Rivnenska oblast is 60.4%.

Figure 18. Share of the unemployed among TB affected persons in the oblasts of Ukraine (in percentage)



According to the WHO findings, high rates of TB morbidity in Ukraine have a clear correlation with the country's economic development. Therefore, when planning activities to reduce morbidity at the national level and analyzing their effectiveness, the index of GDP decline/growth per capita during these periods should be taken into account. The correlation between TB incidence and per capita GDP is a clear indication that overcoming TB epidemic in Ukraine will only be possible in case of qualitative and positive systemic changes not only in the TB service, but also in the whole country's economy. This fact is confirmed by constantly high proportion of the unemployed among TB affected persons (from 52 to 59%), this population group is continually the largest in the structure of patients with tuberculosis. The number of unemployed people depends on the level of economic development of the country.

Figure 19. Dynamics of the share of certain risk groups representatives in the structure of TB patients

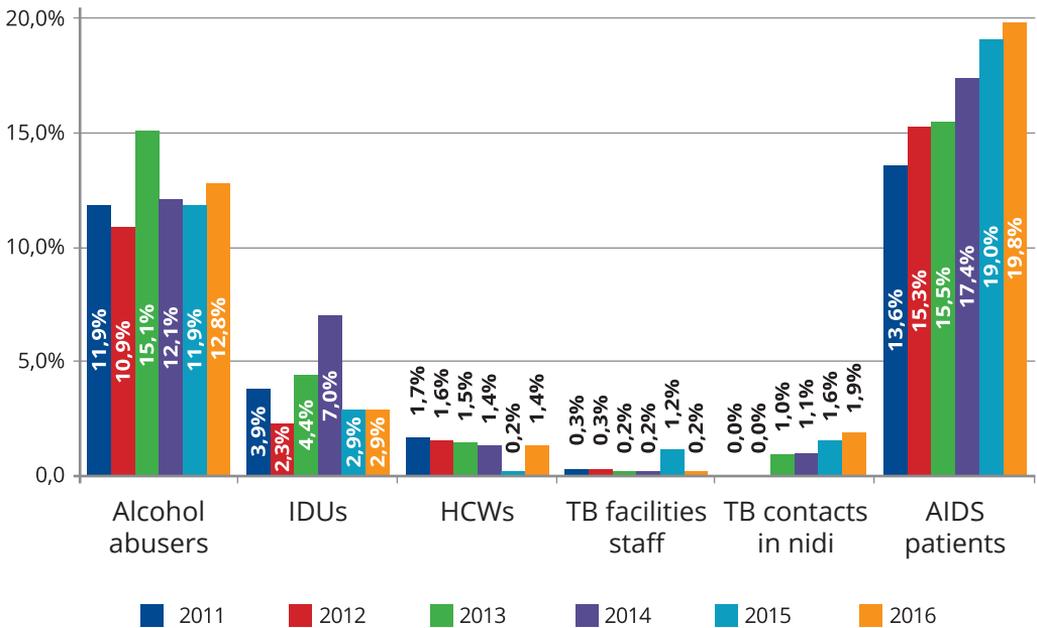
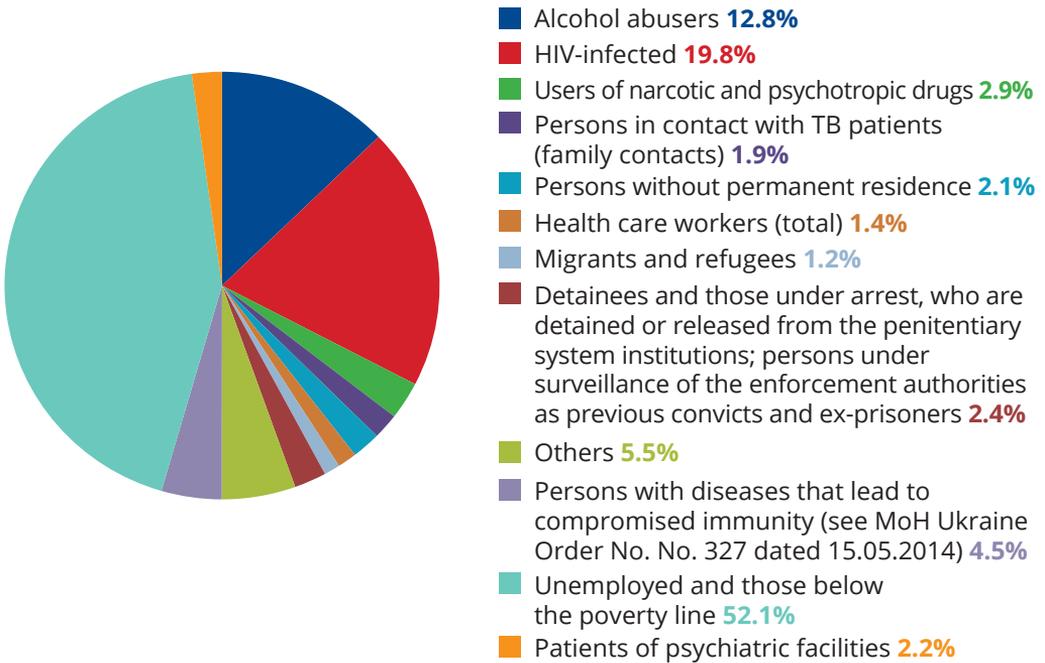


Table 2. Incidence rates among risk groups, in 2016, per 100,000 population according to the passport profiles of the regions

654.28	Alcohol abusers
4384.54	HIV-infected persons
587.71	Use of narcotic and psychotropic drugs
972.04	Persons in contact with TB patients (family contacts)
1713.86	Persons without permanent residence
66.59	Health care workers (total)
265.64	of them, TB facilities staff
60.28	of them, general health care network staff
111.27	Migrants and refugees
1030.96	Detainees and those under arrest, who are detained or released from the penitentiary system institutions; persons under surveillance of the enforcement authorities as previous convicts and ex-prisoners
59.88	Others
151.32	Persons with diseases that lead to compromised immunity (see MOH of Ukraine Order No. No. 327 dated 15.05.2014)
870.50	Unemployed and those below the poverty line
118.60	Patients of psychiatric facilities

The highest TB incidence rate among risk groups representatives is among HIV-infected persons.

Figure 20. Structure of TB incidence among representatives of risk groups according to the passport profiles of the regions, 2016



Thus, it can be concluded that the group at risk of TB is men aged 35-44, unemployed, and those rural residents, who have no permanent job.

Figure 21. TB incidence among all health care workers of the MOH of Ukraine health care facilities and TB facilities staff in intensive indicators (per 100,000 of the respective population)

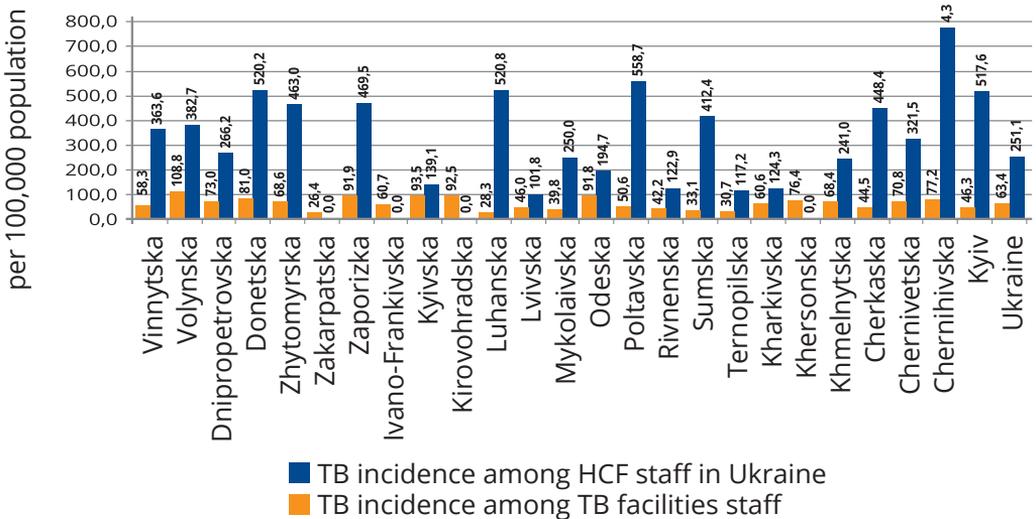


Figure 22. TB incidence among contacts in 2016

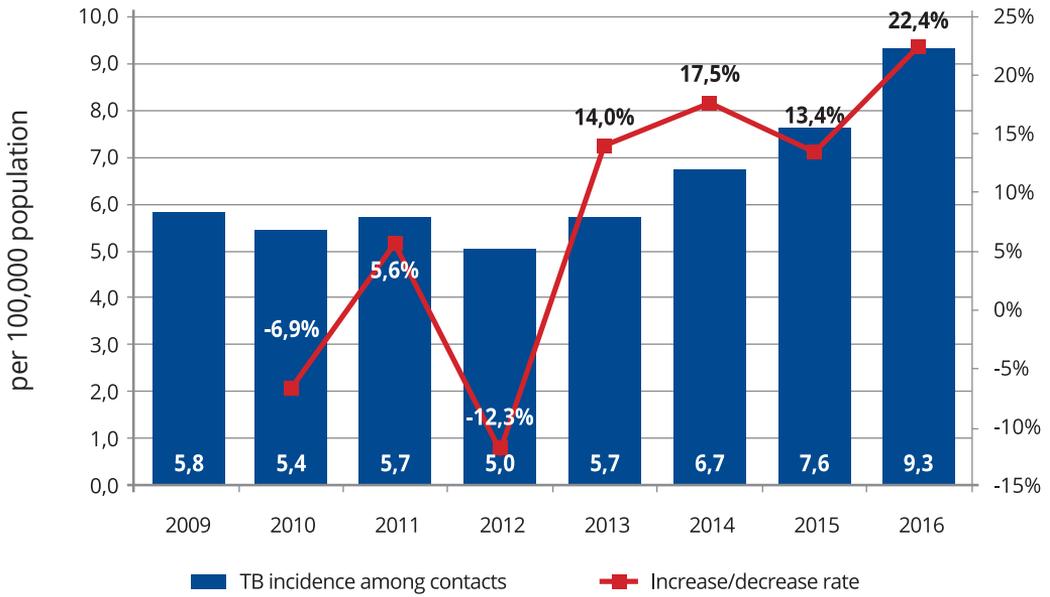
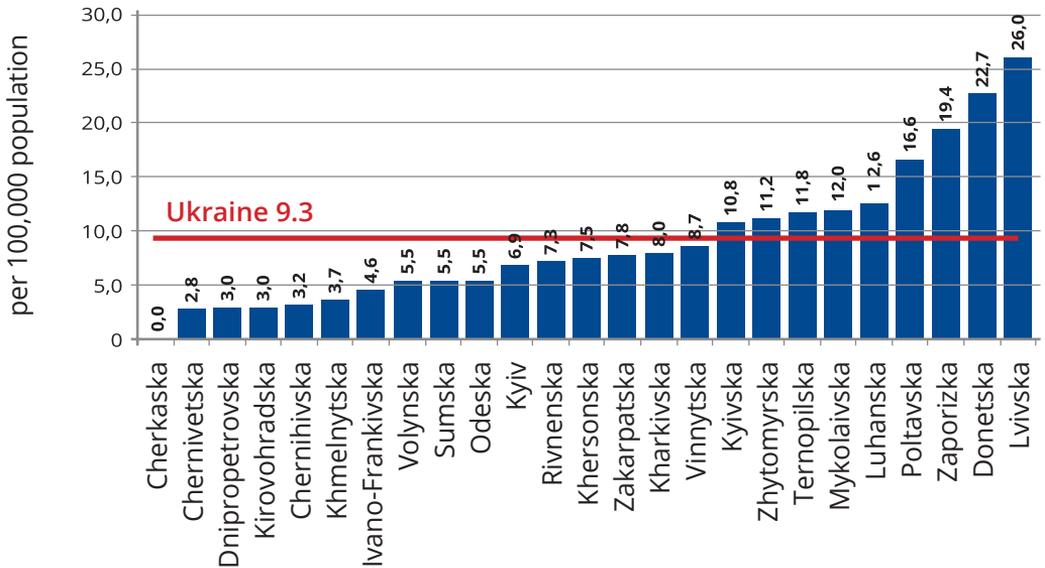


Figure 23. Breakdown of TB incidence among contacts by oblasts in 2016

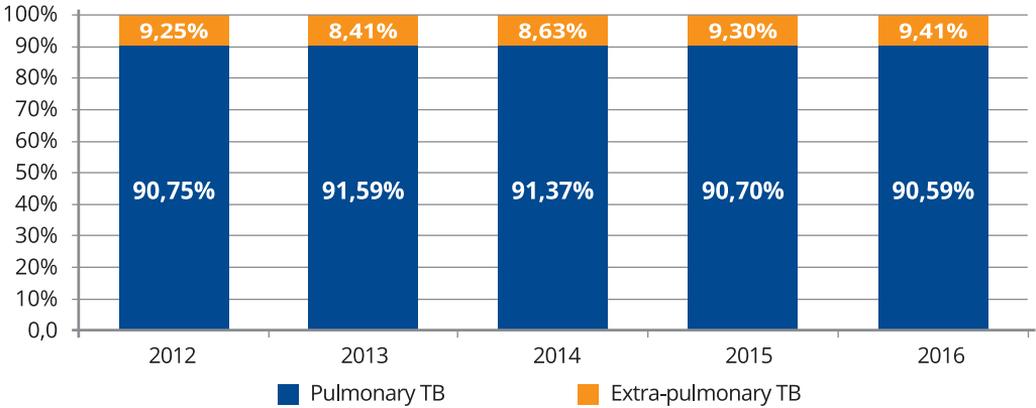


The highest rates of TB incidence among contacts are in Lvivska and Donetsk oblasts (26.0 and 22.7 per 100,000 respectively).

Pulmonary TB incidence

The share of patients with pulmonary TB in Ukraine in 2016 amounted to 90.59% of the total number of people who contracted TB.

Figure 24. Share of pulmonary TB in the overall structure of TB incidence



The incidence rate of pulmonary TB was 60.6 per 100,000 population. The highest incidence rate of pulmonary TB was registered in Odeska oblast and amounted to 119.2 per 100,000 population.

Figure 25. Pulmonary TB incidence in 2016, per 100,000 population

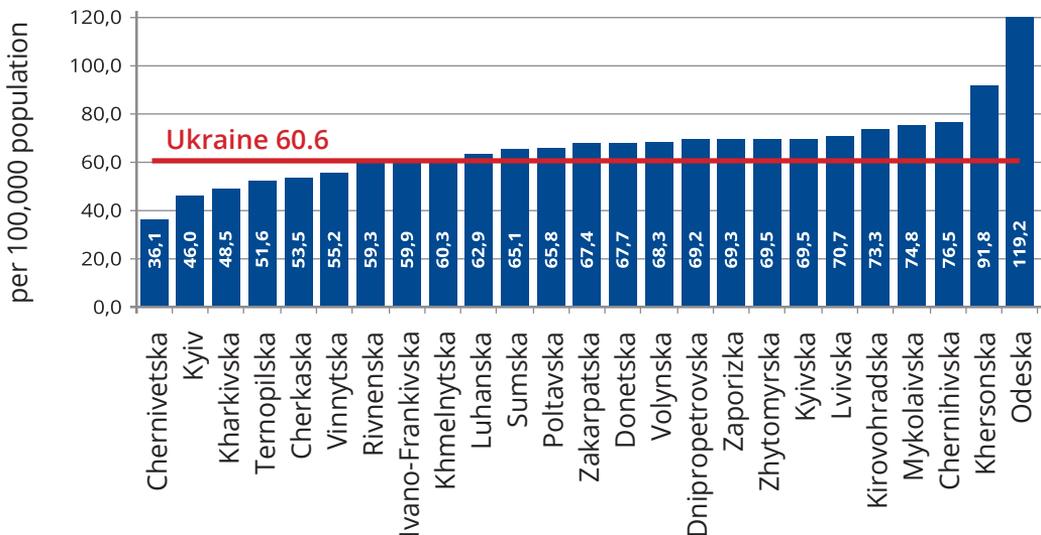


Figure 26. Pulmonary and extrapulmonary TB incidence rates (in intensive indicators per 100,000 population)

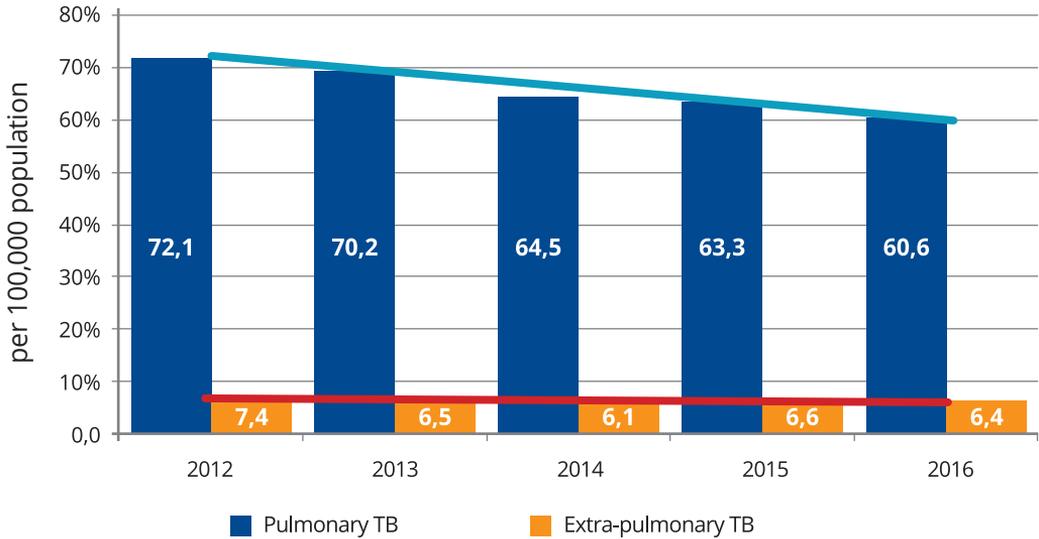
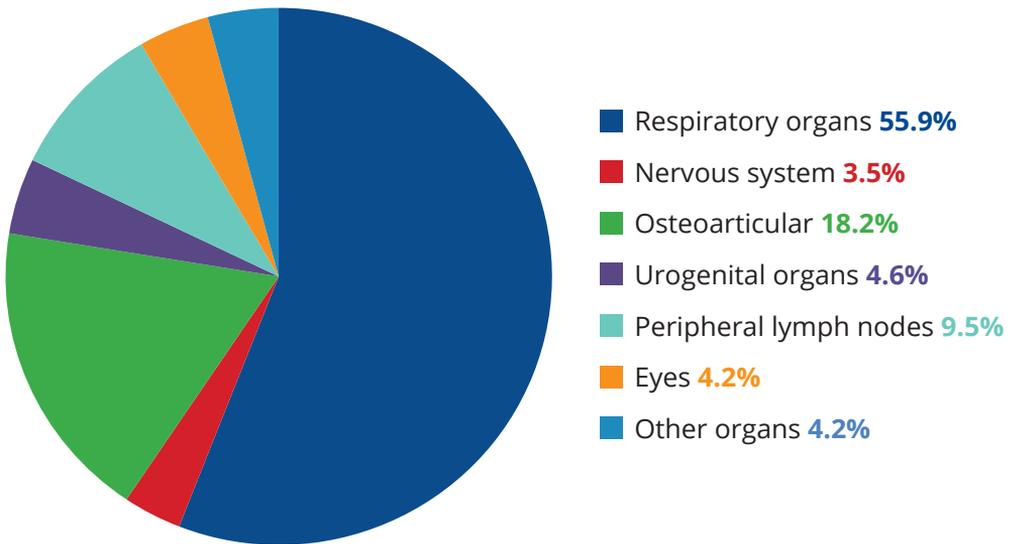


Table 3. Percentage of extrapulmonary forms of TB by age and gender

	% of extrapulmonary forms of TB	% of children under 14 in the total number of TB patients	Male to female ratio	% of TB relapses
2012	9.25%	1.53%	5.2:2.2	29.01%
2013	8.41%	1.71%	4.9:2.1	33.12%
2014	8.63%	1.55%	4.3:1.8	33.81%
2015	9.3%	1.88%	4.3:1.7	62.34%
2016	9.41%	1.98%	4:1.7	53.39%

The share of TB with MTB+ among new cases and relapses in Ukraine was at the average of 69%, in particular, among new cases of pulmonary TB – 67.7%. The highest share is in Volynska oblast – 86% and 83.4%, respectively, the lowest is in Khmelnytska oblast – 56% and at the State Penitentiary Service of Ukraine facilities – 53% and 47%, respectively.

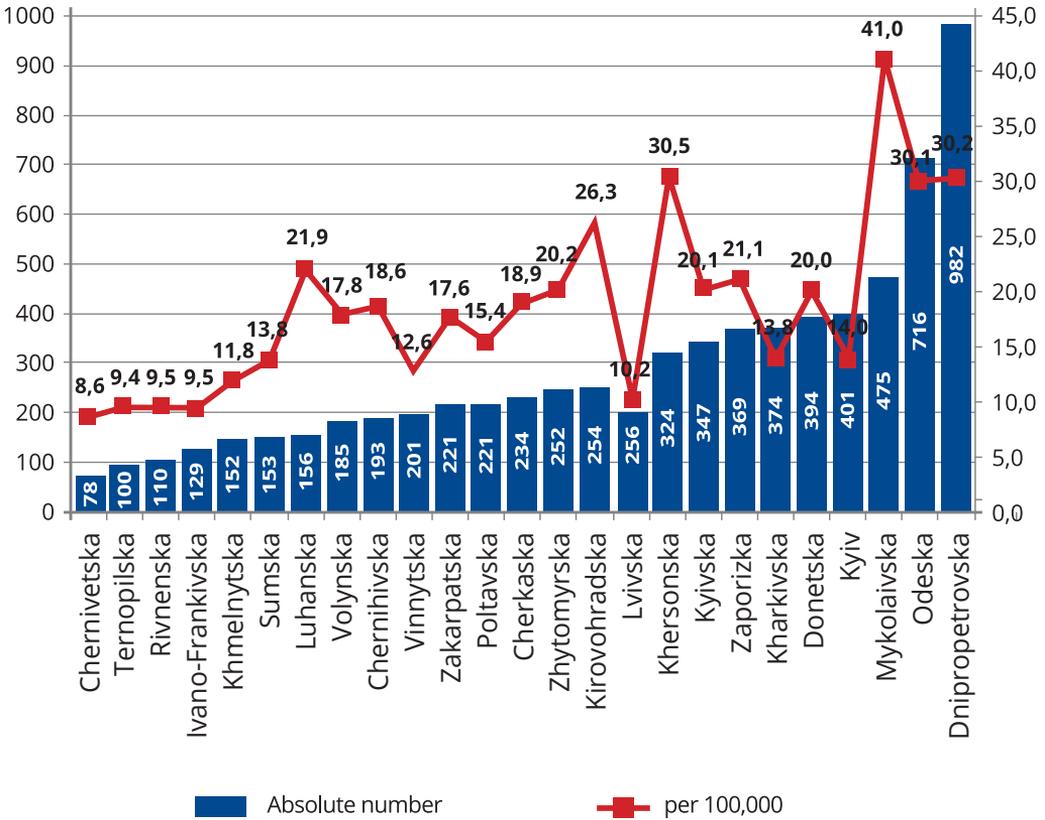
Figure 27. Extrapulmonary TB morbidity structure in 2016

The problem of drug-resistant tuberculosis is one of the most urgent in Ukraine. Drug-resistant TB, as a special form of tuberculosis was singled-out in 1990s, when the frequency of the TB agent's drug resistance to the most active TB drugs (isoniazid and rifampicin) and a significant decline in treatment outcomes was observed, and TB mortality rates after using existing treatment methods began to increase worldwide.

The total number of registered patients with newly diagnosed MDR or XDR-TB was 7,778 cases in 2016 versus 8,440 in 2015. The rates per 100,000 population were 18.3 versus 19.7, respectively. In general, the number of detected cases in the regions decreased, however, in a number of regions there was an increase in the number of detected MDR-TB cases, namely in Luhanska oblast (by 55 cases), Zaporizka (35 cases), Kharkivska (34 cases) oblast and in Kyiv City (30 cases), and there was an insignificant increase in Donetsk, Zhytomyrska, Mykolaivska and Rivnenska oblasts.

The low MDR-TB detection rate in Ukraine (the notified cases are lower than the estimated number by 14%) is associated with a failure to follow TB diagnostics and detection algorithm at oblast level.

Figure 28. Number of TB patients with newly confirmed MDR or XDR-TB diagnosis, 2016 (absolute number and per 100,000)



The highest MDR-TB incidence rates were registered in Mykolaiv'ska (41.0), Kherson'ska (30.5), Dnipropetrovska (30.2), Odeska (30.1 per 100,000) oblasts.

The share of XDR-TB cases among registered MDR-TB patients tends to increase. Thus, in 2016, this share amounted to 14.7% vs. 14.0% in 2015. The largest increase of XDR-TB among MDR-TB patients was registered in Volyn'ska, Donetska, Mykolaiv'ska, Cherkaska oblasts and in Kyiv City.

Figure 29. Share of new cases of pulmonary Rif-TB, MDR and XDR-TB among new cases of pulmonary TB in 2016

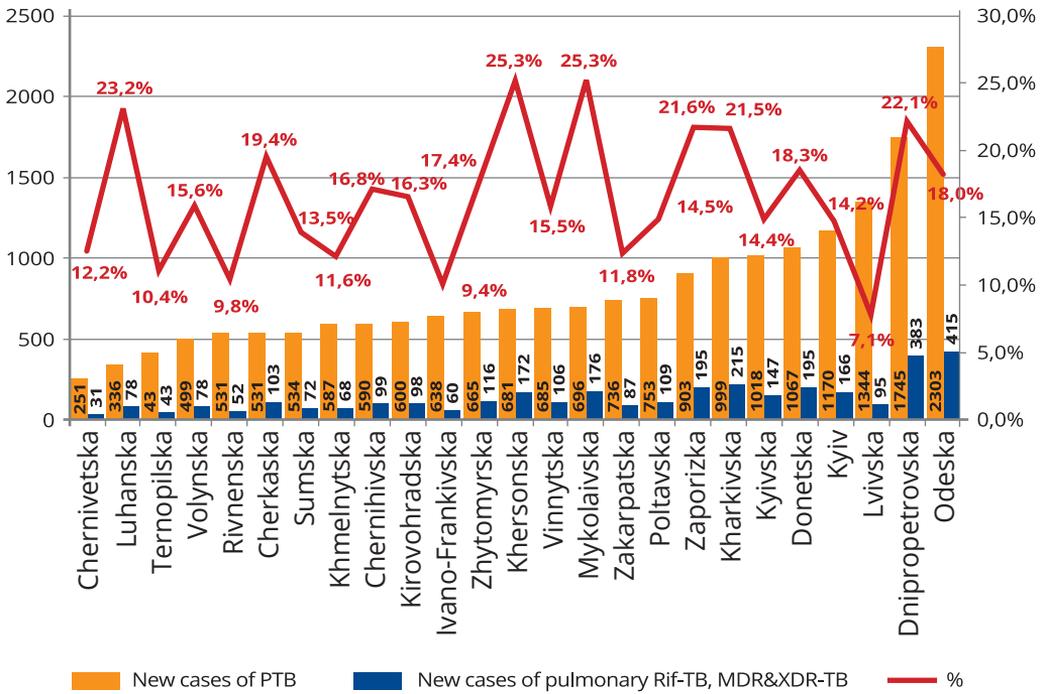
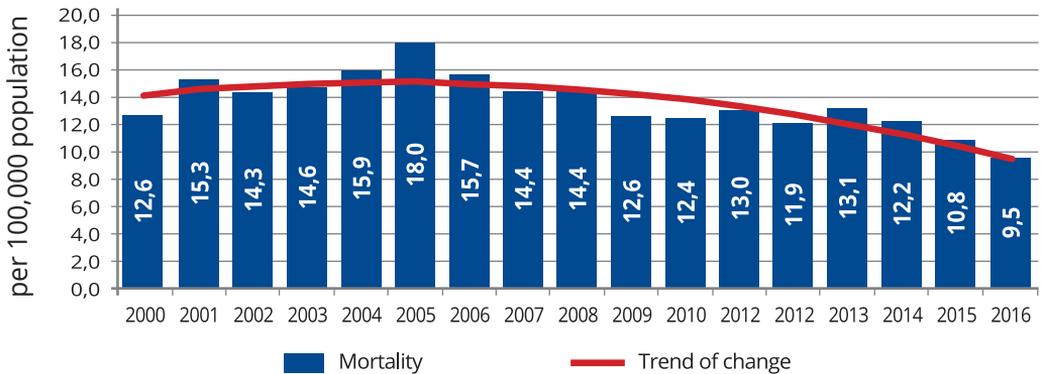
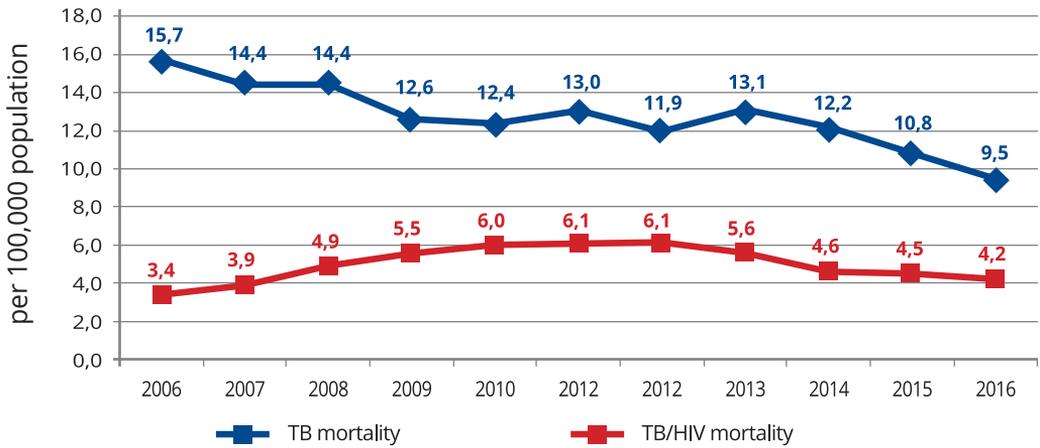


Figure 30. TB mortality rate in Ukraine (in intensive indicators per 100,000 population)



There is a tendency towards a decrease in TB mortality in Ukraine with an average annual decrease rate 8.1% over the past 10 years. In 2016, compared with 2015, TB mortality rate decreased by 12.0% and amounted to 9.5 versus 10.8 per 100,000 population.

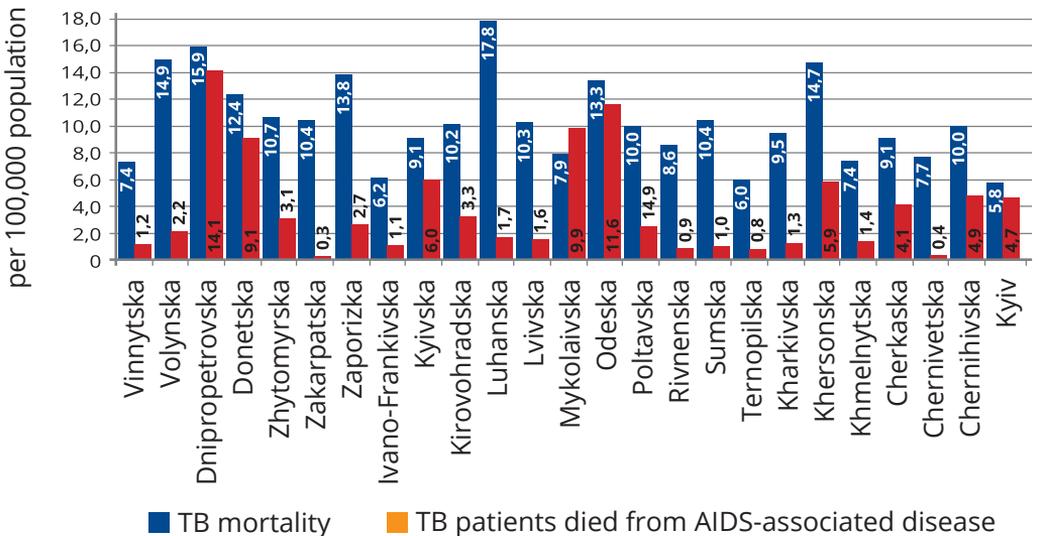
Figure 31. TB and TB/HIV mortality rate in Ukraine (in intensive indicators per 100,000 people)



The highest TB mortality rate was registered in Luhanska oblast, where it is 1.87 times higher than the average mortality rate in Ukraine and makes up 17.8; the lowest mortality rate was registered in Kyiv City – 5.8 per 100,000 population.

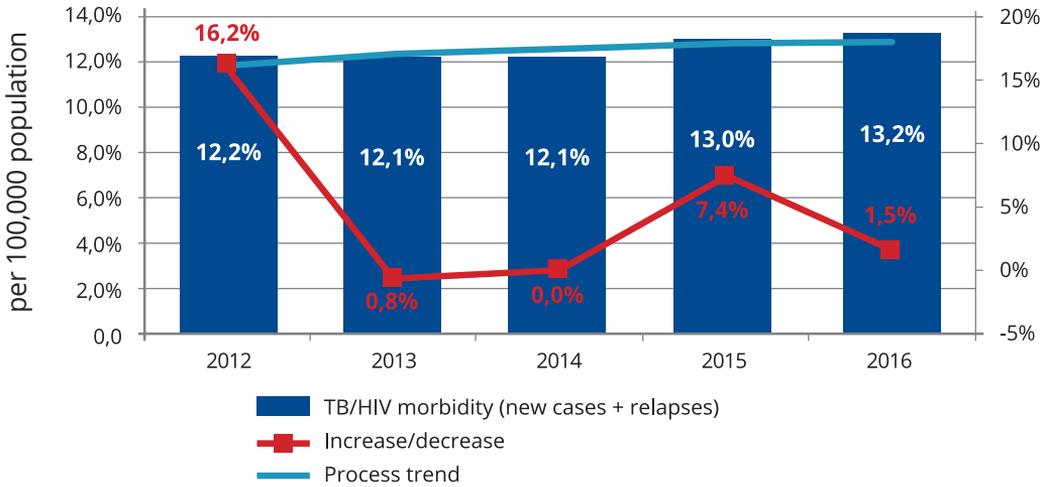
In Mykolaivska oblast TB/HIV mortality rate per 100,000 population exceeds TB mortality rate.

Figure 32. TB and TB/HIV mortality rates by oblasts of Ukraine in 2016 (in intensive indicators per 100,000 people)



TB/HIV incidence remains a driving force in the TB epidemic development in Ukraine. 5,622 cases of TB/HIV (new cases and relapses) were registered versus 5,572 in 2015; the intensive indicator per 100,000 population is 13.2 versus 13.0 – the incidence rate increased by 1.5%.

Figure 33. TB/HIV incidence rate (in indicators per 100,000 population)



The share of TB/HIV co-infection in the morbidity structure is constantly growing.

Figure 34. Dynamics of TB/HIV share in the total number of TB cases (percentage)

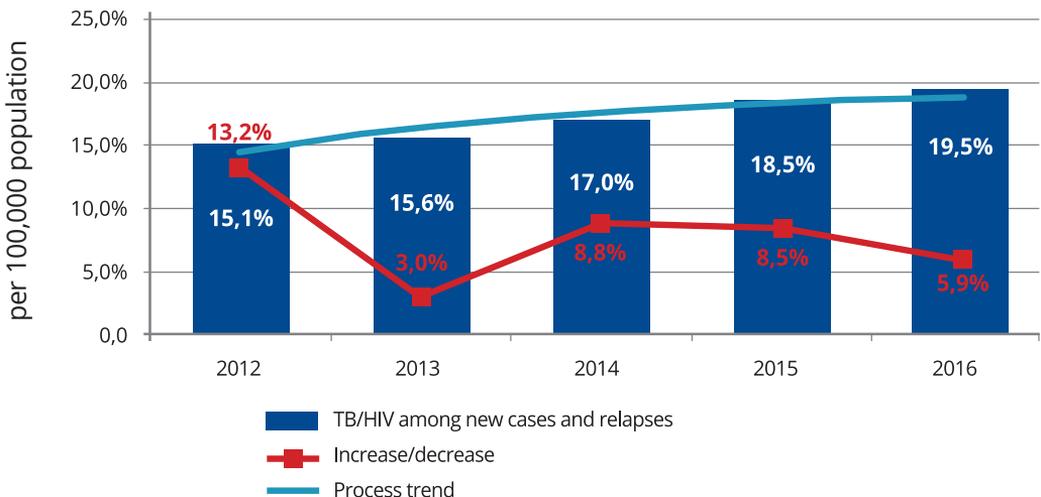
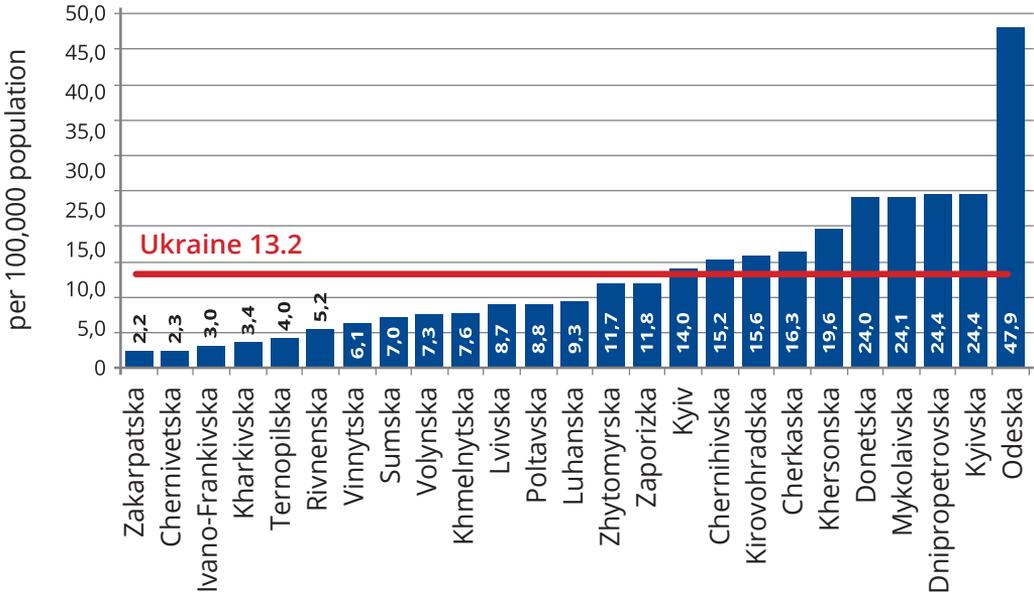
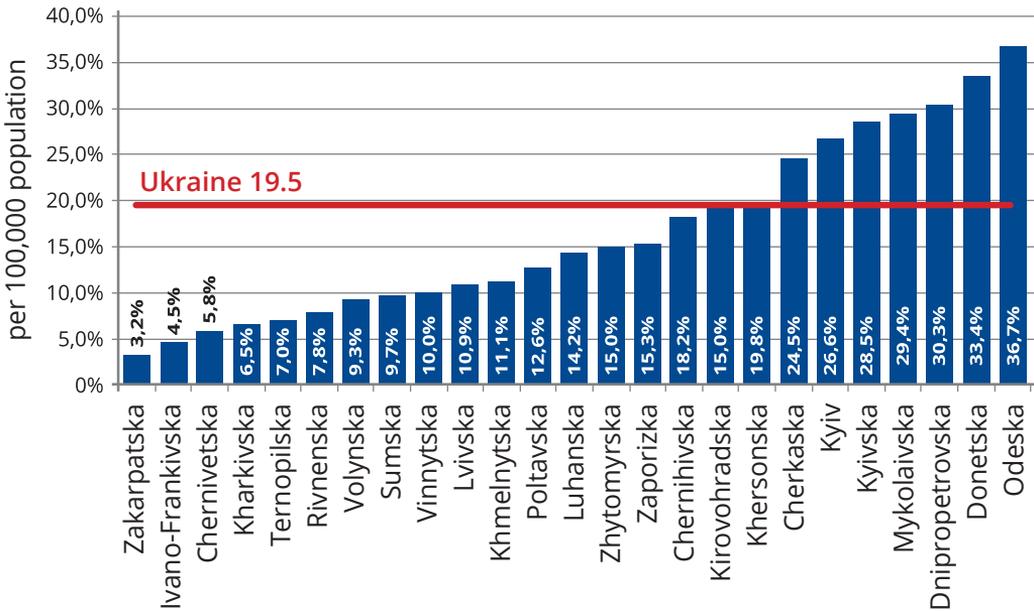


Figure 35. TB/HIV incidence in 2016 in Ukraine in intensive indicators per 100,000 population



The highest TB/HIV prevalence is 47.9 per 100,000 population in Odeska oblast, the lowest is – 2.2 in Zakarpatska oblast.

Figure 36. Percentage of TB/HIV in the morbidity structure



The highest share of TB/HIV amounts to 36.7% in Odeska oblast, and the lowest share is in Zakarpatska oblast – 3.2%.

According to the regions passports profiles for 2016, the breakdown of TB/HIV patients in Ukraine is as follows:

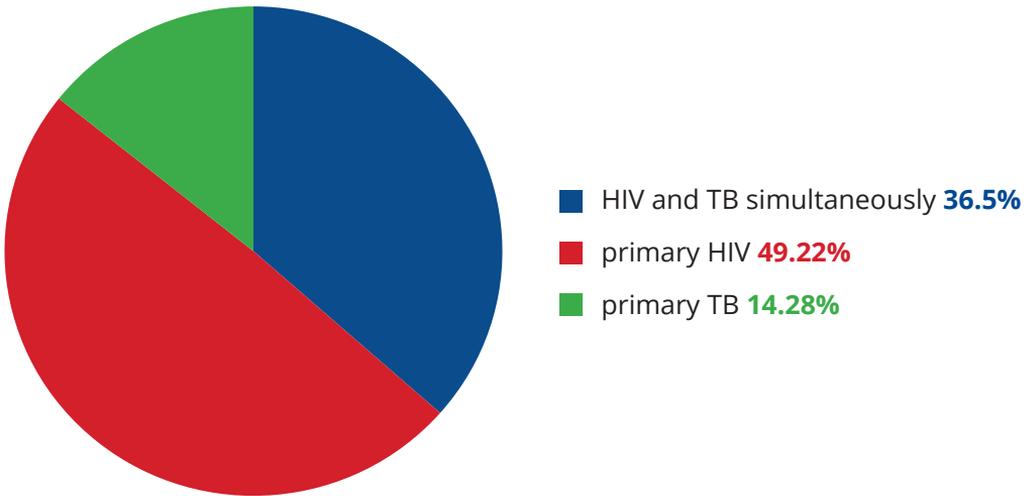
New cases	Re-treatment cases	DR-TB	Children aged 0-4	Children aged 5-14	Children aged 15-17
53.8%	13.2%	34.8%	0.7%	0.7%	0.1%

The average percentage of TB patients screened for HIV is 96.7% throughout Ukraine; in Zakarpatska, Lvivska, Rivnenska, Ternopil'ska oblasts – 100% screening, the lowest screening level is in Chernihiv'ska oblast – 84.6%.

The vast majority of TB/HIV co-infection results from HIV infection. This tendency proves existing gaps in preventive activities among HIV-infected persons. According to the WHO recommendations, the main activities to prevent development of TB in HIV-infected persons are active TB detection, preventive treatment with isoniazid, early prescription of ART and the infection control program implementation in the facilities visited by HIV-positive persons. These measures will be of particular significance in subsequent years in the country in view of the Fast-Track strategy implementation to overcome HIV, the implementation of which Ukraine has joined since 2015.

The level of preventive treatment with isoniazid (hereinafter referred to as 'PTI') among HIV-positive people requiring PTI is still insufficient. In 2016, only 63.8% of the total need for PTI was prescribed to HIV patients requiring treatment (the target value of the indicator is 100%). According to the data of regional TB services, the highest values of the indicator are in Lvivska (100%), Odeska (91.8%) and Vinnytska (89.7%) oblasts. The lowest values are in Volyn'ska (8.3%), Rivnenska (14.0%) and Sum'ska oblasts (31.4%), which is the evidence of poor work management at AIDS centers.

Figure 37. Structure of TB/HIV morbidity in 2015 by case history and a sequence of disease manifestations development



The average share of MDR-TB in TB/HIV patients in Ukraine is 24.6%. The highest percentage of MDR-TB is in Donetsk oblast – 44.2%, and the lowest is in Zakarpatska oblast – 3.3%.

According to the data of the regional profiles for 2016, at an average, in Ukraine ART is received by 85.4% of TB/HIV patients under categories 1-3 (100% in Dnipropetrovska and Kharkivska oblasts, the lowest is 54.3% in Khmelnytska oblast), and 71% of TB/HIV patients under category 4 (the highest is in the Zaporizka oblast – 93.8%, the lowest is in Rivnenska oblast – 50%).

The average level of coverage with co-trimoxazole preventive treatment of TB/HIV patients among those under categories 1-3 in Ukraine is 84.0% (in Kharkivska oblast – 100%, the lowest level is in Khmelnytska oblast – 51.7%), under category 4 – 85% (100% – in Vinnytska, Zakarpatska, Kyivska, Sumska oblasts, the lowest level is in Kharkivska oblast – 39,1%).

According to the analysis results of the reasons for failure to prescribe ART and co-trimoxazole preventive treatment to TB/HIV co-infected patients registered in Quarters 1-2 of 2016, it was reported that ART was not prescribed to 48.8% of patients due to their death, to 16.7% – due to severe condition, 22.3% – due to patient’s refusal from treatment, 9.7% – ART was not prescribed by an infectious disease doctor, and 57% of patients were lost to follow-up. It should also be noted that 20.9% of TB/HIV patients were not prescribed with ART after 8 weeks of started TB treatment.



M&E System Involvement in TB Prevention Activities

M&E centers are created in all oblasts of Ukraine, except for Luhanska and Odeska oblasts. The staffing of M&E centers was at the average 78.1% throughout Ukraine.

Oblast TB/HIV coordination councils worked in all oblasts, except for Odeska. In 2016, intersectoral working groups under oblast coordination councils were not created in Zhytomyrska, Luhanska, Lvivska and Kharkivska oblasts, they are in the process of creation in Donetska oblast.

Functioning of TB patients register is ensured in all oblasts of Ukraine, and the total number of active register users is 1,660.

Monitoring visits from the oblast to region level were conducted in 79.5% of regions of Ukraine's oblasts. Monitoring visits from the oblast to region level to verify TB data quality were conducted in 71.2% of the oblasts.

During 2016, TB facilities collaborated with 85 partners and 38 higher education institutions on TB control.

During the year, one Ukrainian (national level) and 12 regional analytical and statistical bulletins on TB were published; 35 news items on TB were posted in the internet; 376 oblast level seminars/meetings and 25 national level conferences/meetings were conducted.

Training Activities

During 2016, within the Global Fund Program «Investing for Impact against Tuberculosis and HIV», PHC conducted the following trainings:

- ▶ TB/HIV Co-Infection Case Management in Ukraine (92 specialists trained)
- ▶ Opportunistic Infections, Concomitant Conditions and Diseases (96 specialists trained in total)
- ▶ MDR-TB Case Management (90 specialists trained in total)
- ▶ TB Infection Control over in Health Care Facilities (67 specialists trained in total)
- ▶ TB Drugs Management Using TB Patients Register (38 specialists trained in total)
- ▶ TB, DR-TB Case Management Using TB Patients Register (33 specialists trained in total)
- ▶ TB Microbiological Diagnostics (11 specialists trained in total)
- ▶ Internship on TB for Health Care Administrators (19 specialists trained)
- ▶ UV Irradiation – Engineering Component of TB Infection Control (24 specialists trained in total)
- ▶ Strategic Planning of the M&E System Development to Counter TB (35 specialists trained in total)
- ▶ TB Case Management at Primary Care Facilities (48 specialists trained in total)
- ▶ Using the DevInfo Platform as a Tool for Monitoring and Evaluation in TB Control (21 specialist trained).

With the support of the International Training and Education Center for Health (I-TECH) of the University of Washington (UW), the following trainings were conducted:

- ▶ TB/HIV Co-Infection Case Management in Ukraine (115 specialists trained in total)
- ▶ Opportunistic Infections, Concomitant Conditions and Diseases (89 specialists trained in total)

PHC provides support for the development and operation of five inter-regional training centers that work at the premises of regional AIDS centers in the cities of Vinnytsia, Zaporizhzhia, Lviv and Kharkiv, as well as at the premises of the oblast TB facility in the city of Dnipro. 1,046 specialists were trained at the training centers for professional knowledge upgrade, and 46 educational events were conducted during 2016.



TB Detection and Diagnostics

The main component of the WHO TB control strategy (hereinafter referred to as 'the Strategy') is the timely TB detection and diagnostics by using guaranteed quality microbiological testing methods. Within the Strategy on strengthening TB laboratory diagnostics service, the following targets were set:

- ▶ Expanding access to early TB detection;
- ▶ Providing overall access to DST;
- ▶ Improving the quality of laboratory services.

There is an extensive laboratory network for TB detection and diagnostics in Ukraine:

- ▶ Central reference TB diagnostics laboratory of the Ministry of Health of Ukraine at the premises of the laboratory of the State Institution «National Institute of Phthiophysiology and Pulmonology Of NAMS of Ukraine»;
- ▶ 789 level 1 microbiological laboratories (86 of them are in the system of State Penitentiary Service of Ukraine);
- ▶ 59 level 2 microbiological laboratories;
- ▶ 34 level 3 microbiological laboratories (8 of them are in the system of State Penitentiary Service of Ukraine);

Laboratories are provided with modern equipment, including that purchased within the Global Fund grant.

Table 4. List of laboratory equipment for TB diagnostics

No.	Region	GeneXpert system						Analyzer BACTEC™960	Hain Lifescience
		Oblast TB facilities (Level 3)	Municipal TB facilities (level 2)	AIDS centers	Facilities subordinate to the SPSU	National Institute of Phthisiology and Pulmonology of the National Academy NAMS Ukraine	Institute of Epidemiology and Infectious Diseases named after L.V. Gromashevskyyi	Oblast TB facilities (level 3)	Oblast TB facilities (level 3)
1	Vinnytska	1		1	1			1	
2	Volynska	1							
3	Dnipropetrovska		1		1			2	
4	Donetska				2			1	
5	Zhytomyrska	1			1			1	
6	Zakarpatska	1						1	
7	Zaporizka	1		1	1			1	
3	Ivano-Frankivska	1		1				1	
9	Kyivska	1		1				1	
10	Kirovohradska	1						1	
11	Luhanska	1						1	
12	Lvivska		1		1				
13	Mykolaivska	1			1			1	1
14	Odeska							1	
15	Poltavska	1			1			1	
16	Rivnenska	1		1				1	
17	Sumska	1						1	

No.	Region	GeneXpert system						Analyzer BACTEC™960	Main Lifespan
		Oblast TB facilities (Level 3)	Municipal TB facilities (level 2)	AIDS centers	Facilities subordinate to the SPSU	National Institute of Phthisiology and Pulmonology of the National Academy NAMS Ukraine	Institute of Epidemiology and Infectious Diseases named after L.V. Gromashevskiyi		
18	Ternopil'ska	1			1			1	
19	Kharkiv'ska	1			1			1	1
20	Kherson'ska	1						1	
21	Khmelnytska	1		1				1	
22	Cherkaska	1						1	
23	Chernivetska	1						1	
24	Chernihiv'ska	1						1	
25	Kyiv City	1		1		1		3	
Total		31	2	7	13	1	2	30	2

To ensure early detection of TB, including drug-resistant TB, and timely administration of treatment regimens, 63,050 Xpert MTB/Rif cartridges were purchased at the expense of the Global Fund grant during 2016.

An approximate cost of consumables for susceptible TB diagnostics is 1,751.00 UAH, for MDR-TB diagnostics – 3,080.00 UAH.

Detection of TB suspects is carried out at primary care facilities. The target indicator of the National Target Social Program to Fight Tuberculosis for 2012-2016 – «the number of TB cases detected by means of sputum microscopy at primary health care facilities» – is 4.5% for 2016. The quality TB detection is provided in Kyiv City (6.2%), Zhytomyr'ska (5.7%), Zaporizka (5.0%), Chernihiv'ska (4.6%), Kherson'ska (5.0%) oblasts.

The target indicator was not reached in 20 regions, the lowest indicator is in Dnipropetrovska (1.8%), Volynska (1.9%), Poltavska (1.8%), Ternopilska (1.4%) and Chernivetska (1.7%) oblasts.

31,223 pulmonary TB cases were registered in Ukraine in 2016 (according to the reporting form No. 4 (TB-07)). 25,494 cases were diagnosed using molecular testing methods which accounts for 81.6% (new cases – 87.75%, relapses – 85.5%, others – 72.15% (the target value of the indicator is 100%).

The lowest indicator of applying molecular testing methods is in Mykolaivska (66.2%), Cherkaska (66.9%) Vinnytska (70.1%), Dnipropetrovska (79.3%) oblasts. The indicator of applying molecular testing method in Lvivska oblast is reported to reach 100%, however, some mistakes in registering were detected (there were registered more molecular tests than smear microscopy).

The most important condition for TB patients successful treatment is drug susceptibility testing (hereinafter – ‘DST’) for each isolated culture of Mycobacterium TB. In Ukraine, 20,879 cases of TB were bacteriologically confirmed, DST was performed for 20,147 TB cases, which accounts for 96.5% (target value of the indicator is 100%). The indicator was not reached in Lvivska (84%), Luhanska (89%), Kharkivska (90%), Zakarpatska (93%), Vinnytska (95%), Chernihivska (95%), Volynska (96%), Dnipropetrovska (97%), Sumska (97%), Poltavska (98%) Rivnenska (99%) oblasts and in Kyiv City (99%).

The main aspect of ensuring TB diagnostics quality and timeliness is laboratories qualification confirmation by panel testing, as a part of the external quality control (assessment) (hereinafter referred to as ‘EQC’), in relation to all methods of TB microbiological testing.

666 out of 703 level 1 TB microbiological diagnostics laboratories successfully passed EQC (target indicator is 100%). EQC was not properly organized in Vinnytska (93.5%), Donetsk, Dnipropetrovska (97.9%), Zakarpatska (96.4%), Kyivska (67.8%), Cherkaska (92.6%), Chernihivska (96.5%) oblasts.

59 level 2 TB diagnostics laboratories successfully passed EQC (100%).

23 out of 26 level 3 TB diagnostics laboratories confirmed their high proficiency level, except for Ivano-Frankivska and Cherkaska oblasts, (92%).



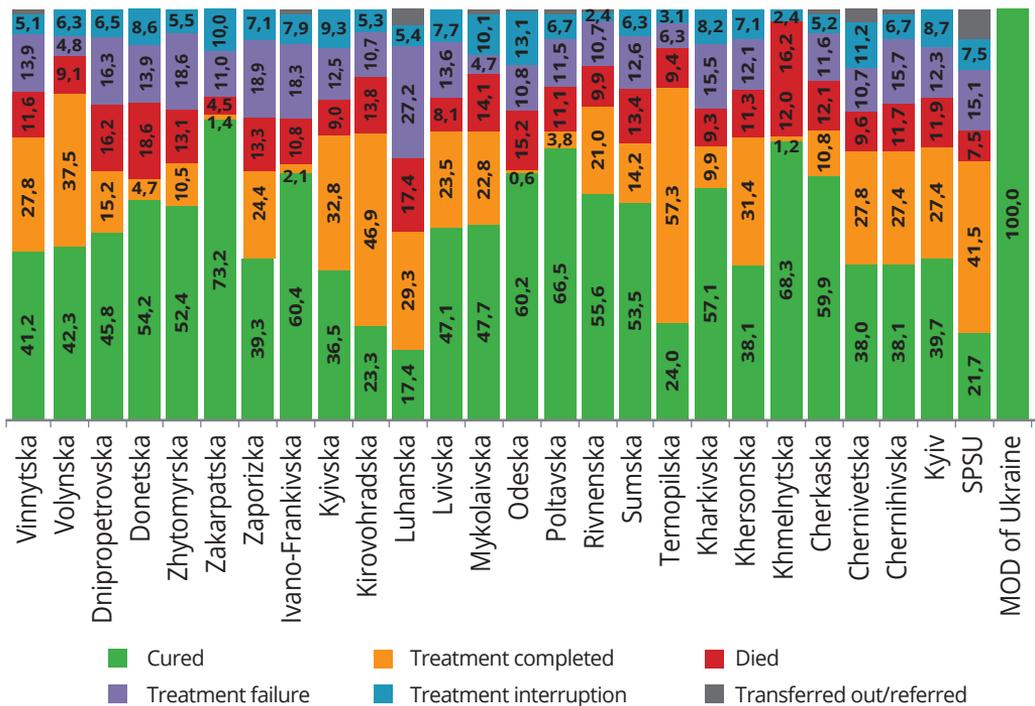
TB Patients Treatment Management

Ensuring effective treatment results in cessation of further spread of TB and prevention of MTB infection among healthy population, and it is one of the key measures to control TB.

According to socio-demographic characteristics, women have better treatment outcomes than men: 68.2% of women versus 53.4% of men successfully complete treatment, and only 9.2% of women versus 13.3% of men die before treatment completion. By age groups, the best treatment outcomes are among children under the age of 18.

Treatment efficacy in the most epidemically dangerous group of patients – newly detected patients with pulmonary TB with bacterioexcretion in the 2015 cohort – remains low, compared to the WHO-recommended indicators. In Ukraine, this indicator is 66.8% compared to the normative indicator at the level of 85%. None of the oblasts has reached the normative indicators of treatment efficacy, however, Volynska, Ternopilska and Rivnenska oblasts are approaching this target (80, 81, 77%, respectively). The lowest indicators of treatment efficacy are in Luhanska (46.7%), Donetsk (58.9%), Zaporizka (60.7%), Odeska (60.8%) and Dnipropetrovska (61.0%) oblasts.

Figure 38. Treatment outcomes of pulmonary TB news cases with bacterioexcretion, 2015 cohort



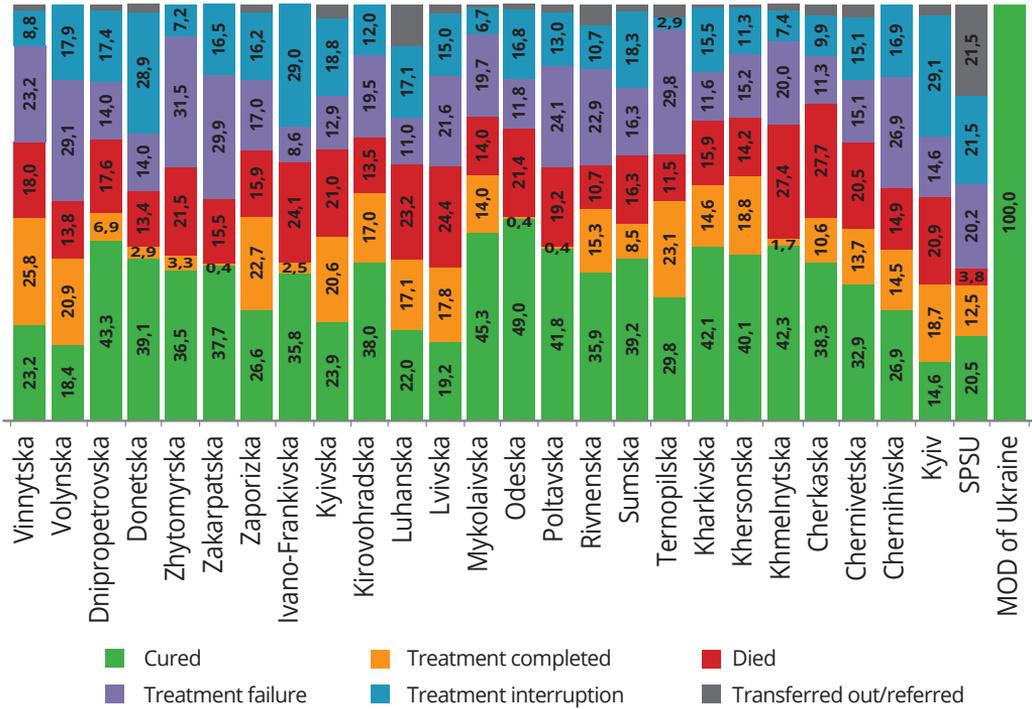
Affiliation with the majority of social risk groups (alcohol abuse, injectable drugs use, absence of permanent residence, prior imprisonment and IDP status) reduces the chances of successful treatment completion by several times and increases the chances of dying before treatment completion.

The main barriers to effective treatment are stigma, lack of knowledge and psychological support, alcohol (drug) addiction, transportation difficulties, lack of time and other resources for daily visits.

The main barriers on the part of service providers are biased attitude of health care staff to outpatient treatment and lack of incentives, rigid health care financing system, health care workers outdated understanding of the infection control, and excessive amount of paper work.

The next important indicator of TB control activities efficiency in the country is MDR-TB patients treatment efficacy. According to the WHO recommendations, such patients treatment efficacy should be not less than 75%. During the latest years, Ukraine has taken one of the last places in the global cohort of MDR-TB patients treatment. In the 2014 cohort, treatment efficacy rate was 46%. The best rates were registered in Mykolaiivska (59.3%), Khersonska (58.9%) and Kharkivska (56.7%) oblasts. The worst indicators are in the SPSU facilities (33.1%), in Kyiv City (33.2%) and in Lvivska (37.1%) oblast.

Figure 39. Treatment outcomes of all MDR-TB cases, 2014 cohort



One of the main factors for MDR-TB patients treatment failure is late detection and delay with the beginning of treatment, low level of patient-centered treatment models implementation and absence of DOT at the outpatient stage of treatment. The high treatment failure rate in the country – 17.9% (in the range from 8.6 to 31.5%) – indicates the urgent need for introducing new treatment regimens with using new TB drugs in the country. The short treatment regimens introduction, recommended by the WHO since 2016, are considered necessary to decrease treatment defaults rate. These tasks will be addressed during preparation and approval of the new TB treatment protocol, the development of which has been started under the guidance of MOH of Ukraine since March 2017.



The Main Conclusions of the Patients Treatment Analysis

Optimization the system of health care provision to TB patients remains one of the priorities of the National Target Social Program to Fight TB in Ukraine. The post-soviet system was based on inpatient treatment of all TB patients, and it did not ensure the appropriate quality of treatment, created preconditions for nosocomial transmission of TB agent and required significant financial expenses for TB facilities support.

Effective outpatient health care provision models should embody a comprehensive, patient-centered approach and promote greater adherence to treatment with regards to a patient's personal needs, his/her social and economic vulnerabilities.

The results of the analysis, according to TB patients register, showed a correlation between a treatment duration and socio-demographic characteristics.

Determinants that have a positive effect on treatment outcomes are as follows:

- ▶ TB case detected during prophylactic check-ups;
- ▶ New TB case;
- ▶ Susceptible TB;
- ▶ Female gender;
- ▶ Age under 18;
- ▶ Health care worker.

On the other hand, there is a number of determinants that have a negative effect on treatment outcomes:

- ▶ TB case detected in an inpatient facility;
- ▶ Treatment after a failure or treatment interruption;
- ▶ Bacterioexcretion;
- ▶ MDR-TB;
- ▶ Male gender;
- ▶ Age over 18;
- ▶ Alcohol abuse;
- ▶ Injectable drugs use;
- ▶ Absence of permanent residence;
- ▶ Prior imprisonment;
- ▶ IDP status;
- ▶ HIV co-infection.

Since the health care system cannot influence patients gender and age, then it is necessary to adapt health services to the specific needs and groups of patients. The above-mentioned risk factors are associated, primarily, with TB patients' risk groups affiliation.

Thus, outpatient treatment with a flexible system of integrated medical and social services can meet patient needs and reduce the number of treatment defaults, which will indirectly contribute to breaking the chain of further spread of multidrug-resistant tuberculosis.

Under the national level initiative of the NGO «Social Indicators Center» and with the experience and research resources of the School of Public

Health of the National University «Kyiv-Mohyla Academy», the operational research was conducted in the period of October 2015 through February 2016 to study the main organizational barriers for effective outpatient treatment of TB patients.

Causes of MDR-TB Treatment Defaults (Barrier Analysis)

Keeping MDR-TB patients on treatment is a complex and dynamic process with a number of factors that influence patient's behavior. The treatment success requires certain behavior from both a patient (taking drugs daily, completion of the full treatment course, etc.) and a physician (treatment monitoring, provision of quality drugs, etc.). For various objective and subjective reasons it often fails, therefore a clear understanding of each patient behavior (and a health care provider) and of reasons for a failure to follow doctor's recommendations are essential for the development of effective social and psychological support activities. These causes are the barriers on the way to recovery. By removing them we will be able to improve patient's adherence to treatment and, thus, influence treatment efficacy.

The causes of poor adherence to treatment fall into three categories:

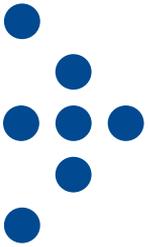
- ▶ Personal (causes that depend on a patient, such as, lack of money for travel expenses);
- ▶ Social (causes that occur on a community, society level, e.g., stigma);
- ▶ Systemic (shortcomings of the health care system, e.g., procurement of poor quality drugs, professional «burnout» of health care workers).

For MDR-TB patients successful treatment, it is necessary to provide medical facilities with the required quantity of second-line TB drugs and to expand access to them, carry out comprehensive treatment of patients using a combination of different methods to achieve treatment efficacy (chemotherapy, pathogenetic treatment, collapse therapy, surgical intervention, climatotherapy, etc.), strictly follow treatment regimens, ensure patients adherence to treatment.

System of actions to be taken at the regional level to prevent treatment interruption:

- ▶ Implementation of a patient-centered approach while choosing a place of treatment for a patient (including closeness of the setting where patients receive TB drugs to their place of residence or work, etc.);
- ▶ Introduction of an effective model of MDR-TB patients support;

- ▶ Provision of social and psychological support to meet particular personal needs of a patient;
- ▶ Practical assistance in addressing social problems (solving problems with housing, documents reclamation, etc.);
- ▶ Informational and psychological support (raising awareness on MDR-TB treatment, TB drugs side effects; reducing negative effects of fatigue after taking drugs for a long time);
- ▶ Strengthening coordination and collaboration between TB service and NGOs through establishing multidisciplinary teams (MDTs) at the service provision sites. MDT can include a district/region TB specialist, DOT station nurse, a social worker, a psychologist and a lawyer;
- ▶ Timely detection of MDR-TB patients at high risk of treatment default in the outpatient phase and development of their individual social support plans, including drug delivery to a convenient for a patient place, upon the need;
- ▶ Developing tolerance in health care workers, involved in the MDR-TB treatment process, through training on effective communication and counseling of MDR-TB patients;
- ▶ Development of local policies on MDR-TB patients support model institutionalization (informing communities and government about MDR-TB patients support model, inclusion MDR-TB patients support activities in local target programs);
- ▶ Involvement of community resources to ensure sustainability of the model (availability of social workers, possibility of free travel to deliver drugs to MDR-TB patients).



Implementation of a Patient-Centered Approach While Selecting a Treatment Place

A patient-centered approach is based on the following principles: effective partnership; respect for patient's rights (patient's informed decision making; confidentiality; privacy of life; self-determination; dignity; non-discrimination; compassion; consideration of cultural diversity while providing services; provision of quality medical and socio-psychological care); patient and community active involvement; all partners involvement; effective monitoring.

The patient-centered approach implies that a patient is in the center of the care provision system, both medical and socio-psychological. In this case, the patient is seen not only as a service recipient, but as a rightful partner, capable of informed decision making. A therapist, XDR-TB diagnosis and treatment expert, and a patient, an expert in his real-life situation and needs, create a tandem, the team, that complements each other and involves other partners to create a comprehensive «treatment support package» on the condition of mutual trust and effective communication.

The patient-centered approach implies that efficient directly observed treatment is achieved by creating comfortable environment for a patient, an interruption in taking TB drugs is considered as a failure of the system to find the approach to the patient.

Arranging a place of treatment closer to a patient and the approach focused on the particular patient and his needs, help keep him on treatment. The research results conducted in different countries of the world (including former Soviet Union countries), where DOT was implemented with NGOs and social workers involvement, demonstrated a decrease in treatment default rates. This approach can be a good solution for improving patients adherence to treatment and more efficient use of health care workers' time, relieving them for clinical work.

It is worth emphasizing the role of motivation and constant support of patients by social workers in the treatment progress. Since social workers meet with their wards on a daily basis, and have more time than medical staff has, they have a better chance to detect adverse effects of TB drugs. A significant default rates decrease was achieved in the sites, where patients were provided with a comprehensive care package (psychological and legal assistance, funds for travel expenses, meals, etc.). Although such care requires an adequate funding, it is still more cost effective than funding inpatient treatment and combating the consequences of defaults and loss of patients.

Analysis of the influence of different outpatient TB treatment models on treatment outcomes in Kyiv City is posted at: http://bit.ly/TB_article_analysis.

The analysis results:

Of all the analyzed new notified susceptible TB cases in Kyiv in 2014, treatment success was registered in 62.3% of cases, about a quarter of the registered cases had a treatment failure – 28.1% and 9.7% of patients died. According to the TB patients register data, more than a half of the patients (66.6%) started inpatient treatment, 31.6% received outpatient treatment, respectively. Regarding health care facility where treatment was completed, almost a half of all 68 patients (46.1%) completed their treatment at TB station; about one fifth of all cases were registered at inpatient facilities – 16.6%, and one tenth – 10.3% – at primary health care facilities. The smallest number of patients completed their treatment at the Red Cross facilities – 4.1%.

In 2014, among those patients who started outpatient treatment, the treatment success rate was 1.3 times higher than that at inpatient settings (75.1% vs. 56.5%). At inpatient facilities, where the treatment started, TB lethality rate was 2.3 times higher than that at outpatient facilities (11.7% vs. 5.0%). Of course, this can be explained by the fact that TB cases, treated at inpatient and

outpatient facilities, vary in complexity greatly. Nevertheless, treatment efficacy rate at inpatient facilities should also be higher, because if a patient does not seek for medical care at all, he/she will be cured in 25% of cases.

The treatment success rate was 1.4 times higher than the average (90.2% vs. 63.1%) among patients who completed their treatment at primary health care facilities. TB lethality was 6.1 times lower than the average (1.5% vs. 9.1%), respectively. The worst results were in those cases when patients completed treatment at inpatient facilities. The treatment failure rate at inpatient facilities was 1.2 times higher than the average (33.3% vs. 27.8%) and TB lethality was 1.7 times higher than the average (15.3% vs. 9.1%).

Thus, the results of this operational research indicate the outpatient treatment in Kyiv City is more efficient than the inpatient, at that the best results of treatment success were registered at the primary level of the general health care network.



TB Patients Support Effective Model Implementation

In 2016, the implementation of the Project «Strengthening the Quality Out-patient Care System for MDR-TB Patients by Providing the Best Medical, Social and Psychological Services and Developing Treatment Adherence» (hereinafter referred to as ‘the Project’) was continued within the Global Fund program. The Project ensures gradual coverage with observed treatment and providing MDR-TB patients with food packages twice a month at the outpatient treatment stage, with the URCS staff involvement, in accordance with the established patients selection criteria within the approved regional quotas.

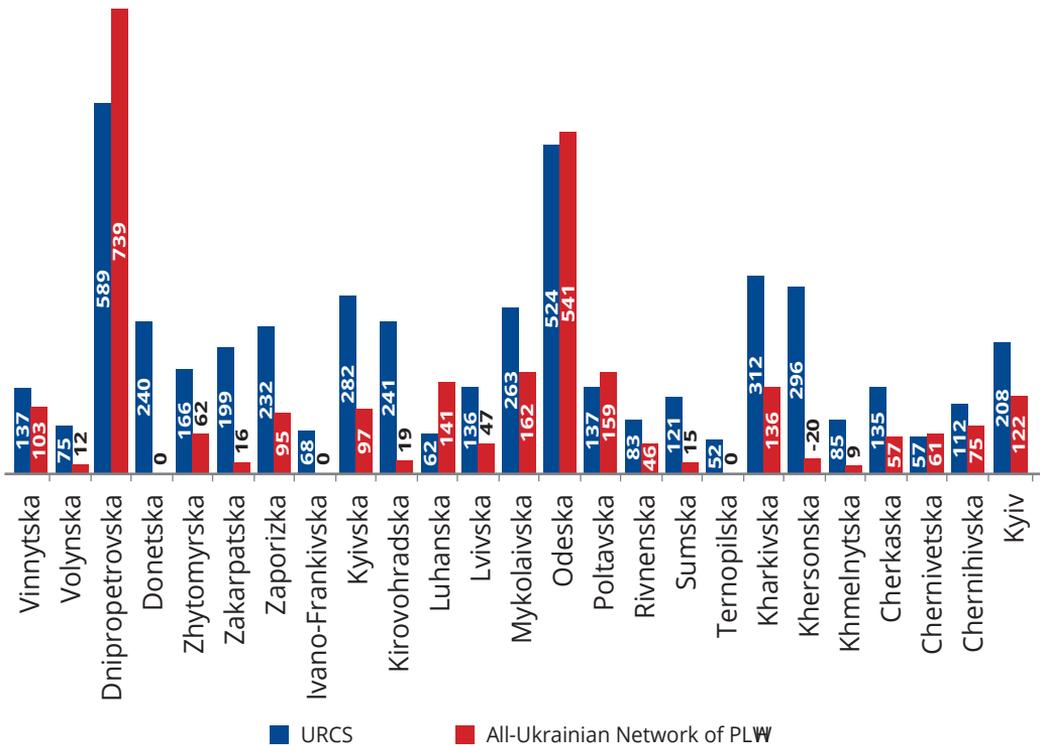
The components «Social Support at the TB Outpatient Treatment Stage» and «Treatment Social Support for HIV-positive Patients with HIV/TB Co-Infection» were implemented within the GF projects «Investing for Impact against Tuberculosis and HIV», which improve access to high-quality medical services for TB patients, with the «All-Ukrainian Network of PLWH» experts participating. TB patients of categories 1-3 were under their patronage at the outpatient treatment stage, if there were risk factors of being lost to follow-up: AIDS patients, IDUs, homeless, Roma representatives, MSMs, ex-prisoners, CSWs, IDPs.

During 2016, medical and social support was provided to 2,734 TB patients by social workers of the «All-Ukrainian Network of PLWH», and to 4,812 MDR-TB patients - by the URCS.

The proper medical and social support significantly impacts treatment efficacy. The treatment success rate of those MDR-TB patients, who received and did not receive medical and social support from the URCS in 2012-2014, significantly differs from the general cohort (79.5% and 45.2%, respectively) and from those patients with TB/HIV co-infection (70.5% and 22.5%, respectively).

Further implementation of effective patient-centered outpatient treatment practices and changing the policy regarding TB treatment management will significantly reduce a TB case treatment cost and improve TB treatment results.

Figure 40. *The number of TB patients, who received medical and social support from the URCS and «All-Ukrainian Network of PLWH», by regions of Ukraine, 2016*





Evaluation of TB Infection Control Activities Implementation at TB Facilities of Ukraine,

as of 01.01.2017

(Regional passport profiles and regional indicators for monitoring TB infection control measures were analyzed, except for the Crimea and the City of Sevastopol)

The development of TB and HIV epidemic processes in Ukraine over the past years and their combination leads to an annual increase in TB/HIV co-infection incidence, which increased from 4.3 per 100,000 population in 2006 to 10.6 in 2016. Tuberculosis still occupies a leading position among AIDS-defined conditions (40.8%) and remains the main cause of death for people living with HIV/AIDS.

An indicator describing TB infection control activities implementation efficiency is also an annual TB incidence rate among health care workers registered in all regions of the country. In 2016, according to the SI «Center for Medical Statistics of MOH of Ukraine», 359 health care workers of health care facilities of the MOH of Ukraine system (66.8 per 100,000 population) contracted TB, including 36 health care workers of TB facilities, which is 216.9 per 100,000 population in this group (in 2015 – 37 people and 206.0 per 100,000 population).

IC standards on TB are regulated by the MOH Order (No. 684, dated 18.08.2010, «On Approval of the Standard on TB Infection Control at Health Care Facilities, Places of Long-term Stay and Residence of TB Patients») and the amendments made by the MOH of Ukraine Order No. 950, dated 23.12.2011 (hereinafter referred to as 'the Standard'), which lists the measures, aimed at reducing the spread of TB infection in inpatient and outpatient facilities, penitentiary facilities and at home.

Organizational Activities

During the reporting period, 19 visits to 18 regions were conducted by PHC experts in pursuance of clause 2, sub-clause 3 and measures for implementation of the National Target Social Program to Fight TB in 2012-2016, approved by the Law of Ukraine No. 5541-VI, dated October 16, 2012; clause 1, sub-clause 1 of Annex 2 to the National Target Social Program to Fight HIV/AIDS in 2014-2018, approved by the Law of Ukraine No. 1708-VII, dated October 20, 2014, and within the implementation of the Global Fund grant to provide technical, organizational and methodical assistance in the sites.

Infection control management is carried out by the defined body at all health care facilities of the country (Commission on Infection Control), IC action plan is developed annually and its implementation is controlled at a specific health care facility in accordance with the Standard. In addition, in 18 oblasts, regional TB IC plans were approved by health care structural departments of oblast state administrations and Kyiv municipal administration, which implies effective coordination of IC activities among all stakeholders.

During monitoring visits, PHC experts checked the quality of TB IC plans, their implementation, analyzed accuracy of the budget estimates required for IC activities, as well as the actual financing. It was revealed that not all of the estimated funds were allocated by the regional funds administrators for the IC activities implementation in TB facilities of Kyiv City, Vinnytska, Zhytomyrska, Zaporizka, Ivano-Frankivska, Kyivska, Luhanska, Mykolaivska, Odeska, Rivnenska, Kharkivska, Khersonska oblasts.

Before 2014, according to the Law of Ukraine «On Provision of Sanitary and Epidemiological Welfare of Population», sanitary and epidemiological control in all health care facilities, including TB facilities, was executed by the sanitary and epidemiological service. After CMU Resolution No. 442, dated 10.09.2014, laboratory centers of MOH of Ukraine have no controlling function in this respect. Currently, specialists of TB facilities and general health care facilities, responsible for implementation of infection control activities, carry out the evaluation of compliance with the Standard requirements in their facilities independently.

According to the generalized data provided by the regional facilities of the general health care network, 72.6% of primary care facilities in Ukraine meet the requirements of infection control. In Dnipropetrovska, Khersonska, Kirovohradska, Kharkivska, Khmelnytska oblasts 100% of primary health care facilities meet the requirements of infection control. The lowest indicator is in Zhytomyrska (0%), Volynska (2.9%) oblasts, insufficient level is in Zaporizka (40.6%) oblast.

According to the information from regional TB facilities, 66.8% of the facilities meet the requirements of infection control. The highest value of the indicator, which is 100%, is in Vinnytska, Donetsk, Zakarpatska, Luhanska and Lvivska oblasts. At the same time, none of the TB facilities in Sumska, Chernivetska oblasts and in Kyiv City meet the requirements of infection control.

During monitoring visits of PHC to regional TB facilities in 2016, it was found out, that in most cases, the second level TB facilities in oblasts are not included in the fit test schedules, which proves an inadequate level of organizational and methodological work.

Development of standard operational procedures/algorithms for TB facilities staff and following them during medical procedures, associated with high risk of infection, and during work in the TB infection high risk zone, are the key to countering nosocomial TB transmission. Requirements to standard operational procedures (SOPs) during work in high-risk areas at TB facilities are described in the Standard (item 3.9.1, section 'Administrative Control of the Infection Control Plan'). The analysis of check lists (No. 5) «INFECTION CONTROL IN TB FACILITIES», conducted by PHC experts during monitoring visits, revealed that SOPs development at health care facilities of Vinnytska, Odeska, Zaporizka and Poltavska oblasts had not been completed.

Administrative Control

It was observed in the course of monitoring visits, that preference to sputum collection place arrangement at health care facilities was given to collection outside the premises, at outdoor posts, and in accordance with the requirements of the Standard on sputum collection stations. Along with this, rooms for sputum collection were arranged in a small number of facilities. Most of these rooms do not meet the requirements of the Standard in terms of equipment and control over the efficiency of local ventilation installations, and are, in fact, a high-risk zone, where the air quality control in the enclosed space is ineffective.

In accordance with section 3.11 «Division of Patient Streams» of the Standard, patients streams in all TB facilities should be divided upon the smear microscopy results on AFB and TB drugs susceptibility. The separation by risk zones, depending on risk level, is marked in colors (red, yellow, green) on the department layouts. However, as the results of the PHC monitoring visits showed, sometimes such separation does not reflect the reality: due to the unpracticality of TB facilities old buildings; health care staff fails to ensure compliance with the medium and low risk zones requirements, often there is only a high risk zone of TB infection. An example of the old TB facility building successful reconstruction is Vinnytsia Oblast TB Dispensary, where the premises for the staff were moved outside the high-risk zone, and patients' wards were converted into semi-isolated cubicles.

During the reporting period, the TB outpatient treatment model was further developed in Ukraine, as one of the most important components of health care reform in overcoming TB epidemic in Ukraine, and as a real lever in dividing TB patients streams to avoid risk of TB transmission.

Table 5. *Over the latest 4 years the percentage of TB patients treated at DOT stations of primary care facilities and at other facilities and institutions has increased:*

Years	No. of DOT stations at TB facilities	Treated at DOT stations at TB facilities		No. of DOT stations at other health care facilities	Treated at DOT stations at other health care facilities	
		No. of patients	% of the need		No. of patients	% of the need
2013	375	15513	86.7	3083	18566	75.56
2014	319	14471	83.14	1872	13987	79.62
2015	304	11313	87.32	2500	13379	80.59
2016	198	10643	85.11	3143	14617	84.92

The confirmation of TB transmission risk reduction at TB hospitals is the reduction of the share of Category 1 and 3 patients without bacterioexcretion that were admitted for inpatient treatment in TB hospitals during the reporting period – 25.3% (2015 – 27.2%). Along with this, the «Unified Clinical Protocol of Primary, Secondary (Specialized) and Tertiary (Highly Specialized) Health Care to Adults. ‘Tuberculosis’» (MOH of Ukraine Order No. 620, dated 04.09.2014) is not observed at a number of regional TB facilities. Thus, at the TB facilities, where staff does not contribute to countering TB transmission, this indicator is significantly higher than the national average and makes up 44.6% - in Ternopil'ska, 42.3% - in Cherkaska, 41.9% - in Lviv'ska and 40.9% - in Vinnytska oblasts.

The epidemiological situation in TB infection nidi remains extremely complicated after the adoption of the CMU resolution No. 442, dated 10.09.2014, «On Optimization of Central Executive Bodies»; the TB service is not provided with a proper support from the laboratory centers regarding TB prevention activities organization, their implementation monitoring for such nidi sanitation. TB incidence rate among contact persons in TB nidi remains high, as of 01.01.2017, it was 736.3 per 100,000 in this group of population in Ukraine (in 2015 – 760.1 per 100,000).

Air Quality Control in the Enclosed Space

Compliance with the requirements to local ventilation systems and/or UV-fixtures placement and maintenance, approved by the Standard, was checked by the PHC experts during monitoring visits. To remove infectious aerosol from the risk zone in TB facilities (radiography room, endoscopy room, sputum collection station, biosafety cabinets), both local ventilation and common type ventilation (installed in TB facilities in Donetska, Lvivska, Kharkivska and Mykolaivska oblasts) are used.

Typically, their operation monitoring by the responsible persons is missing due to lack of necessary equipment in the facility (smoke tests, vaneometers, thermogravimetric, etc.), or due to lack of funds for contracting specialized vendors that can make assessment of the ventilation systems efficiency. In addition, the health care facilities financing level on electricity expenses does not always allow using these devices at full range, due to their high electricity consumption.

All regional TB facilities are equipped with bactericidal lamps of open type; needs calculations of shielded UV lamps for high-risk zones were made and submitted to funds administrators, but these funds were allocated insufficiently. Despite the indicator improvement – 69.8% (in 2015 – 56%) of shielded bactericidal UV lamps provision (according to the Standard, the quality criterion is not less than 90% in the high-risk TB infection zone), Ukraine, as a whole, and 20 regions have not reached it. This kind of equipment is adequately provided only to health care facilities in Vinnytska, Kirovohradska, Odeska, Khmelnytska oblasts and in Kyiv City.

To ensure air quality control in enclosed space of high-risk zones, a regular monitoring of this equipment functioning is required, which is to be conducted with UV-meters, available at all TB facilities of the third level.

However, the reliable results of UV lamps efficiency measurements are possible only upon UV-meter regular metrological calibration, which is also one of the important administrative TB infection control measures. During 2016, TB dispensaries managers in 22 oblast ensured verification of UV-meters and were able to receive reliable results in monitoring UV lamps efficiency. However, as of 01.01.2017, 3 UV-meters at oblast TB dispensaries in Zaporizka, Sumska and Ternopil'ska oblasts are unverified, and it is currently impossible to analyze UV lamps efficiency and monitor air quality in the enclosed space.

Personal Respiratory Protection

The Standard (Art. 22 et seq.) provides for the following criteria for infection control efficiency regarding personal respiratory protection:

- ▶ Percentage of health care facilities where respirators are used (95% and above) in high-risk areas/during high-risk procedures.
- ▶ Percentage of health care workers' coverage with fit testing (the number of health care workers who went through testing) during the year (99%);
- ▶ Percentage of units, where masks are used by patients in high-risk areas (95% and above) and during high-risk procedures.

As of 01.01.2017, in TB facilities of Ukraine:

- ▶ The percentage of TB facilities where respirators are used in high-risk areas/during high-risk procedures is 92.7% (2015 – 99,61%);
- ▶ Respirators availability for working in high-risk areas/during high-risk procedures is 106,2% (2015 –104,0%). The national level indicator is overestimated because of high indicators in Vinnytska (399.6%) and Mykolaivska (169.8%) oblasts. In 11 oblasts the availability of respirators for health care workers does not reach 95%;
- ▶ Health care workers coverage with fit testing during the reporting period is 77.0% (2015 – 76.0%) and does not meet the Standard requirements. It was found out that a significant number of the second level TB facilities is not included in the fit-test schedules in the oblasts and indicates an insufficient organizational and methodological work done by TB facilities management;
- ▶ Percentage of departments where masks are used by patients in high-risk areas and during high-risk procedures is 99.7% (2015 – 100%). At the same time, PHC experts revealed during monitoring visits to oblasts, that a the typical failure of patients with bacterioexcretion is masks misuse (nose is not covered), which proves a lack of educational work provided to patients by staff at all TB facilities.

Conclusions on the Infection Control Management

During the reporting period, the quality of infection control organizational and administrative measures (planning, availability of estimates and their timely submission to the funds administrator, dividing patients streams) increased.

TB facilities managers actively promote separation of risk zones, arrangement of separated sections for health care staff outside the high-risk area.

Along with this, a number of quality control criteria (indicators) regarding personal respiratory protection measures, required by the Standard, were not met (the share of TB facilities, where respirators are used in high-risk areas/during high-risk procedures; the coverage of health care workers with fit testing).

The absence of annual assessment of the ventilation systems efficiency and lack of funding for electricity expenses are the main reasons for their role minimization in air quality control in the enclosed space.

By virtue of TB facilities managers, only in 5 oblasts of Ukraine the necessary number of shielded bactericidal UV lamps for the high-risk areas was provided (where, in addition to the centrally supplied lamps, the rest of the lamps were purchased at the expense of the local budget).

The development of SOPs in a number of TB facilities was not finished, which also refers to the drawbacks in implementing administrative measures.

Funds administrators (health care structural departments of oblasts administrations and Kyiv municipal administration) do not ensure the planned funds allocation to meet the need for the implementation of infection control measures (in 11 oblasts the availability of respirators for health care workers does not reach 95%, as required by the Standard; no funds are allocated for Tb departments reconstruction to separate risk areas).

High incidence rate among contacts in TB nidi demonstrates insufficiency of organizational and administrative activities, and imperfection of regulations to settle this problem.

The high morbidity rate among TB facilities staff is the evidence of the Standard requirements on TB control continuing violation, and the non-compliance with its requirements leads to TB transmission in the facilities.

Recommendations:

the main characteristics of the new National Target Social Program to Fight TB and regional TB control programs implementation results should be the absence of occupational TB cases, first of all, among TB facilities staff and among other health care facilities staff, and also, absence of cross-infection among patients in TB facilities;

complete the health care reform, reorganize TB service with expanding outpatient treatment of TB patients, in particular, those without bacterioexcretion;

improve legal regulation of health care staff work management in TB nidi;

provide funds within new regional programs to move the premises for medical staff outside the high-risk zone; ensure efficient functioning of the ventilation systems; procure bactericidal shielded UV lamps (to reach 90% level) and respirators based on the need; timely verify UV-meters and biosafety cabinets;

during the first half of 2017 accomplish the development of SOPs for working in a high-risk environment in TB facilities, as well as their improvement;

in order to improve the coordination of infection control activities at health care facilities of the regions, continue sharing the positive experience of regional infection control plans, approved by health care structural departments of oblast state administrations.



Key Achievements within the Program Implementation in TB Control Areas

In 2016, the implementation of the National Target Social Program to Fight TB in 2012-2016 was completed. The key results: epidemiological indicators were improved (TB incidence decreased by 4.1%, TB mortality rate decreased by 18.2%).

Improving Health Care System with Regard to TB Control

- 1.** Optimization of the TB service and integration of TB services at the primary level continue.
- 2.** At the moment, there are five inter-regional training centers in Lviv, Vinnytsia, Dnipro, Zaporizhzhia, and Kharkiv under the Public Health Center of MOH of Ukraine support.

3. With the technical support of the Global Fund program, regular trainings on TB based on international standards were conducted (according to international approaches, 4,081 specialists were trained just within the Global Fund program; 3,047 specialists were trained, according to the Ministry of Science data, but only 2,521 full-time TB specialists from health care facilities were trained, that is, over 80%).
4. Curricula on TB prevention and treatment at higher educational medical institutions and postgraduate medical educational institutions were improved in accordance with international standards.

Key Achievements in Monitoring & Evaluation and Assessment of TB Control Activities

1. The monitoring and evaluation system implementation and the assessment of the Program implementation at the central and regional levels were ensured at the appropriate level (The MOH of Ukraine Order No. 326 «On the Unit for Monitoring and Evaluation of TB Control in TB Facilities» was approved on 15.05.2014; the M&E units were established at TB facilities of 23 regions of the country (in Luhanska and Odeska oblasts the units were not established).
2. TB reporting and recording forms were improved in line with international standards.
3. The electronic register of TB patients functioning is ensured. The legal regulation TB patients register functioning is completed (MOH Order No. 818, dated 19.10.2012, «On Approval of TB Register Records Maintaining», registered with the Ministry of Justice under No. 1864/22176, dated 06.11.2012).

The system has comprehensive information protection in accordance with the legal regulations requirements of the technical protection system, as per the certificate of the State Service for Special Communications and Information Protection of Ukraine.

Collaborative work of national and regional experts of the Ministry of Health, Ministry of Justice, Ministry of Defense, the Institute of Phthiology and Pulmonology named after Yanovskyi of NAMS of Ukraine, with PHC accurate coordination, ensured entering data of 261,000 TB cases for the period of 2013-2016 into the Register and high quality database maintenance. Thus, the integrated database on tuberculosis was provided.

4. Monitoring visits system has been developed and implemented to ensure on-the-job assistance and control over compliance with legisla-

tion in TB control area. During the period from 2014 through 2016, the joint visits on technical, organizational and methodical assistance were practiced by the national level experts from both civil and penitentiary sectors. This practice enabled the services collaboration strengthening at the regional level and improving TB and HIV prevention, diagnostics and treatment.

The Key Achievements in the Area of TB Detection and Diagnosis

- 1.** Molecular methods of TB rapid diagnostics were implemented. This enabled improving MDR-TB detection significantly. Over the recent years, MDR-TB detection rate increased – from 3,482 in 2009 to 7,778 in 2016.
- 2.** The Central Reference TB diagnostics Laboratory of the MOH of Ukraine was established, its functions are entrusted to the microbiological laboratory of the SI «National Institute of Phthisiology and Pulmonology named after F.G. Yanovskyi of NAMS of Ukraine» (MOH of Ukraine Order No. 995/102, dated 22.11.2013, «On Ensuring the Functioning of the CRL of MOH of Ukraine»).
- 3.** The system of laboratory tests external quality control was regulated by the MOH of Ukraine Order No. 788, dated 28.07.2016, «On Approval of the Regulation on the Tests Quality Management System in the Laboratories that Perform TB Microbiological Diagnostics». TB diagnostics microbiological laboratories of all levels, including the SPSU, participate in the rounds of external quality control of drug susceptibility testing for the first- and second-line TB drugs.
- 4.** For the first time in Ukraine, in 2014, the national epidemiological survey on the prevalence of drug-resistant tuberculosis was conducted under support of the WHO Office.
- 5.** The TB microbiological laboratory diagnostics network optimization was carried out (within 5 years the number of level 1 and 2 laboratories was reduced by 22%).
- 6.** TB laboratory diagnostics test results improved:
 - ▶ Laboratory diagnostics of new TB cases: 2011 – 45.7%, 2016 – 65.2%;
 - ▶ Drug susceptibility testing of new TB cases: 2011 – 43.3%, 2016 – 96.8%;
 - ▶ Molecular testing of new TB cases: 2013 – 51.1%, 2016 – 86.5%.

The Key Achievements in the Area of TB, TB/HIV, MDR-TB Treatment and Prevention

The national protocols on TB patients treatment were brought into compliance with international standards and the WHO recommendations (The MOH of Ukraine Order «On Approval and Introduction of Medical and Technological Documents for Standardization of Medical Care in Tuberculosis», MOH of Ukraine Orders No. 1091, dated 21.12.2012; No. 731, dated 16.08.2013; No. 620, dated 04.09.2014).

The standards on treatment of patients with TB, TB/HIV co-infection and MDR-TB were put into action.

The most favorable TB patients treatment models with the emphasis on outpatient treatment stage were developed and implemented.

Coordination of TB and HIV/AIDS services was strengthened.

TB Infection control standards for TB were put into action by the MOH Order No. 684, dated 18.08.2010, «On Approval of the Standard for TB Infection Control at Health Care Facilities, Places of Long-term Stay and Residence of TB Patients» (with the amendments made by the MOH of Ukraine Order No. 950, dated 23.12.2011), which lists the measures, aimed at reducing the spread of TB infection at inpatient and outpatient facilities, penitentiary facilities and at home.

Key Achievements in the Area of Pharmacological Management

- 1.** In 2014, the department for management of medicines and medical devices was created at the national level to implement the best international practices and improve the existing system of pharmacological management in Ukraine.
- 2.** The system for monitoring medicines and medical devices balances and usage on a monthly basis in the regions of Ukraine was established, with further managerial decisions to ensure the continuity of TB patients treatment.
- 3.** The methodology for TB drugs needs calculation was improved in accordance with international recommendations and active Ukrainian legislation.
- 4.** The continuity of TB patients treatment was ensured in the conditions of the extremely irregular TB drugs supplies at the expense of the state budget.

To date, the implementation of the National Target Social Program to Fight TB in 2012-2016 depended greatly on the external financing (the Global Fund provided approximately 40% of the total funding). Under such circumstances, the state policy of TB control cannot be recognized as the one that ensures effective resistance to the epidemic, and therefore, it requires substantial transformation.

The Cabinet of Ministers of Ukraine supported the draft resolution on approval of the Strategy to ensure a sustainable response to TB and HIV epidemic for the period until 2020, and approval of the action plan for its implementation. This document needs to be approved to meet the Global Fund requirement for \$126 million grant, as it specifies the national plans for combating TB and HIV in Ukraine in the next three years.

The system of measures at the national and regional levels is implemented with the aim of further improvement of TB epidemiological situation due to stabilization of incidence rate, mortality rate decreasing and improvement of treatment efficacy of susceptible TB, drug-resistant TB, TB/HIV co-infection through the realization of public policies based on multidisciplinary, patient-centered, cost-effective principles of general and equal access of the population to quality prevention, diagnostic and treatment services aimed at the efficient use of the available resources.



Main Activities of the TB Program in Ukraine to be Implemented at the National Level

Health System

Approve the Concept of the National Target Social Program to Fight TB in 2017-2021 and the National Target Social Program to Fight TB in 2017-2021.

Provide efficient management of the resources required to ensure effective and comprehensive access to health care services.

Implement the agreed mechanisms for funding Program activities based on the assessment of cost-effectiveness and performance.

Develop and implement the National Plan of TB Facilities Network Reorganization based on the recommended standards and criteria for planning and

prognosing the number of TB beds, and the approved criteria of hospitalization and discharge.

Optimize the number of beds at TB facilities and bring their number into compliance with IC requirements.

Review and implement the strategic plan for human resources development based on the WHO recommendations.

Organize continuous training of health care workers at all levels on the multidisciplinary patient-centered health care services provision in terms of M/XDR-TB detection, diagnostics and treatment; monitoring and evaluation; IC, etc.

Laboratory Network

Strengthen the TB microbiological laboratory diagnostics network for quality diagnostics of all forms of TB.

Introduce rapid molecular tests as an initial diagnostics method for persons with TB symptoms, in accordance with the WHO recommendations.

Ensure increased access to TB diagnostics in remote areas by improving sputum transportation logistics, as well as accessibility and availability of rapid molecular tests.

Implement the quality management system of TB microbiological laboratory diagnostics tests.

Drugs Supply and Management

Ensure the use of TB drugs of assured quality with introduction of the new TB drug need calculation methodology based on the international approaches.

Increase access to Group C and D TB drugs (new drugs – imipenem, meropenem, etc. – included in the scope of drugs).

Introduce new TB drugs (bedaquiline, delamanid).

Uninterrupted TB drugs supply to the health care facilities that provide treatment to TB patients at inpatient and outpatient facilities, in particular, fixed-dose drugs, including pediatric forms.

Pharmaceutical legislation and other legislative regulations gap analysis, their update, review and improvement.

Strengthen control to stop the practice of over-the-counter sales of TB drugs.

Improve pharmacovigilance and adverse reactions control based on the tools, technical and human resources available in Ukraine.

Infection Control

Implement actual TB IC measures aimed at TB spread prevention at health care facilities, places of long-term stay and residence of TB patients, as well as strengthen infrastructure of TB facilities after their optimization.

Review the MOH of Ukraine Order No. 684, dated 18.08.2010, registered with the Ministry of Justice of Ukraine under No. 803/18098 on 10.09.2010 «On Approval of the Standard for TB Infection Control at Health Care Facilities, Places of Long-term Stay and Residence of TB Patients».

TB Treatment and Case Management

Implement patient-centered approach to treatment, including children and socially nonadaptive populations, introduce short treatment regimens and new drugs according to the WHO recommendations.

Reform the system of TB care provision to patients with TB by introducing models with an emphasis on outpatient treatment.

Strengthen the model of integrated services provision to TB patients, including primary health care, as well as TB prevention and treatment with community engagement through broad application of modern information and communication technologies.

Ensure social support of patients with TB and MDR-TB, focused on the needs of a patient and his/her family, with the involvement of civil society to ensure treatment adherence and full course completion.

Ensure continuity of service provision to IDPs, migrants, persons without citizenship through introduction of the cross-border control mechanism.

Provide palliative care to patients with TB according to international recommendations.

Review evidence-based adapted clinical guidelines «Unified Clinical Protocol of Primary, Secondary (Specialized) and Tertiary (Highly Specialized) Health Care to Adults. 'Tuberculosis'», approved by the MOH of Ukraine Order No. 620, dated 04.09.2014.

Childhood TB

Increase BCG coverage at birth and cancel BCG re-vaccination at the age of 7.

Refuse from an annual mass screening using the tuberculin skin test for each child, and actively detect TB cases in TB high-risk groups.

Implement WHO-recommended preventive treatment regimens for children with latent TB infection.

Abandon current outdated strategy of hospitalizing children without TB (TB contacts etc.) and children with non-severe forms of TB, as it leads to a huge financial burden for the country and to the increased risk of nosocomial TB transmission, it mounts stigma and psycho-emotional trauma for children and their families.

Adapt protocols for TB in children diagnostics, treatment and prevention according to international standards.

TB/HIV Co-Infection

Ensure effective operation of coordinating mechanisms at national and regional levels to facilitate the provision of comprehensive services to patients with co-infection and co-morbidities most frequently encountered and associated with TB (diabetes mellitus, use and abuse of psychotropic substances, immune system disorders, etc.).

Ensure adequate access to HIV counseling and testing.

Provide bi-annual screening to people living with HIV for latent and active TB, and preventive treatment, if indicated.

Ensure adequate access for patients with TB/HIV to early ARV treatment and co-trimoxazole preventive treatment.

Drug-Resistant TB

Ensure access to adequate treatment (including the fifth group of TB drugs and compassionate use of new TB drugs) for all M/XDR-TB patients to halt further development of resistance and to limit transmission of XDR-TB.

Introduce new, short course treatment regimens and new TB drugs in line with WHO recommendations, thus improving treatment outcomes, ensuring patient-centered care and reducing treatment costs.

Ensure palliative care for DR-TB patients with treatment failures through development and introduction of national guidelines for palliative care and treatment facilities provision with a proper case management and infection control.

Human Resources

Unify pre- and postgraduate curricula and revise them in accordance with new approaches to TB care.

Review staff list and job descriptions.

Raise salaries (incentives) for TB facilities staff (therapists and nurses) and primary health care facilities staff.

TB Control in Pre-trial Detention Centers and Prisons

Improve coordination of TB control activities between penitentiary and civil health care system at all levels to ensure the unified approach in health care provision.

Promote «Center for the Provision of Medical Care to Convicts and Detainees» establishing to develop the integrated health care system in Ukraine.

Define collaboration mechanisms between medical and non-medical services (security staff etc.) to ensure TB control activities optimal implementation in the penitentiary sector.

Facilitate the provision of standardized TB control measures in all penitentiary facilities, and ensure full integration of TB control activities between the civilian and penitentiary sectors.

Advocacy, Communication and Social Mobilization

Implement state social contracting to ensure protection of people with limited access to health care, raise public awareness, solve the problem of the society negative attitude to TB and HIV patients, and their discrimination by health care system, with civil society organizations involvement in active fight against TB.

Develop and implement advocacy, communication and social mobilization strategy.

Facilitate establishing associations of people affected by TB, and their involvement in TB control activities.

Support other vulnerable populations and social determinants.

Expand access to TB rapid molecular testing and patient-centered treatment for vulnerable populations.

Ensure sustainability of TB control activities among key affected populations that are currently being implemented by NGOs through the mechanism of social contracting with funding from the local (oblast and/or regional) budgets.

Introduce patient-centered services provision to vulnerable groups close to their places of residence, expand harm reduction programs.

Ethics and Human Rights

Ensure an overall access to quality diagnostics and treatment for all patients with TB, irrespective of their social status, comorbidities or low treatment adherence in the past.

Provide social support to all TB patients in need, including MDR-TB patients, during outpatient phase of treatment, irrespective of the form of TB or funding source by using funds from local budgets.

Revise the existing legislation on forced isolation. Develop a necessary legal support to use all possible ways (social support, motivation and implementation mechanisms) before considering coercive measures.

Epidemiological Surveillance and Data Management

Develop the unified system of monitoring and evaluation of TB control activities in order to improve the process of strategic planning, implementation of the national and regional TB programs, charity programs, international technical assistance projects.

Ensure the recording and reporting documentation improvement and proper functioning of TB patients register, regardless of the ownership and subordination; use the Register data in the course of generating up-to-date information on TB and epidemiological indicators.

Develop the minimal list of variable indicators of social determinants.

Ensure information exchange between various data sources used for TB surveillance.

Operational Research

Ensure standardization of operational research in Ukraine, and using its findings to develop policies for updating legislative regulations.

Analyze the projects and technical assistance programs implementation efficiency, including transparent operational research.

Ensure coordination of scientific research planning, implementation in Ukraine, including operational research, and application of the received scientific products.

Develop and introduce innovative methods of TB cases diagnostics and treatment.

Staff Training

As of 01.01.2017, health care facilities are staffed with 69.3% of TB specialists, with 92.6% of nurses; in accordance with the regulations, staffing of TB facilities with laboratory specialists and laboratory assistants with secondary education should be 62.30%.



Key Activities of the TB Program in Ukraine to be Implemented at the Regional Level

- 1.** Comprehensive and patient-centered TB screening, diagnostics, treatment and prevention.
- 2.** Early diagnostics of all forms of TB and overall access to drug susceptibility testing, including the use of rapid tests.
- 3.** Overall access to quality care and the whole range of services for all patients with TB, including its drug-resistant forms, and support of patients to develop their adherence to treatment.
- 4.** Joint efforts for countering TB/HIV co-infection and management of co-morbidities.
- 5.** Treatment of patients with latent TB infection and preventive TB treatment of high-risk groups representatives, as well as vaccination against TB.

- 6.** Political commitment followed by provision of sufficient resources, including policies of universal coverage with health services and related social services.
- 7.** Improvement of health care system in TB and DR-TB control.
- 8.** Development of the unified system of monitoring and evaluation of TB control activities.
- 9.** Introduction of actual TB IC measures aimed at TB spread prevention at health care facilities, places of long-term stay and residence of TB patients, as well as strengthening infrastructure of TB facilities after their optimization.
- 10.** Involvement of civil society in TB control.
- 11.** Social protection of patients and service providers.

In order to fight tuberculosis effectively, it is necessary to strengthen the responsibility of various subjects of state administration and local self-governance for implementing TB control activities.

Also, for efficient TB countering, Ukraine requires a favorable socio-political situation in the country, changes in the attitude of the authorities and citizens to the problem of TB in general, and development of state policies, as well as individual and social behavior, adequate to the current TB control challenges in Ukraine.

In the socio-economic sphere, poverty eradication needs to be addressed; unemployment reduction; strengthening control over migration processes; countering homelessness and neglect; ensuring a decent quality of life and social guarantees; health care system reform.

Thus, tuberculosis is not only a medical problem. Only 15-20% of success in TB control depends on health professionals, the rest depends on the government, people's well-being, standard of living, and hence, on the economy of the country. Tuberculosis is a social problem that reflects the socio-economic condition of the country, cultural and educational level and the well-being of the population, health care development level, including the TB service.



Conclusions

To combat tuberculosis in Ukraine, it is necessary to adopt the Concept based on the WHO recommendations outlined in the TB Action Plan for the WHO European Region for 2016-2020; review and evaluate the current strategy with the focus on the existing tools for improvement of the situation; clearly define the overall goal, objectives, expected results and an overview of the challenges that the new National Tuberculosis Program must address; conduct a comparative analysis of current and new approaches to fulfilling the set tasks; determine the cost-effectiveness of large-scale interventions; ensure the availability of funding for human resources, procurement of drugs, equipment and consumables.

In order to succeed in TB control and prevention, it is necessary to carry out the following activities:

- ▶ Reform the TB care system, in particular, provide a patient with the best possible medical services, integration of medical care provision, which will ensure people's access to TB diagnostics, treatment and care services;
- ▶ Set up departments for palliative and hospice care, DR-TB treatment, outpatient care development;
- ▶ Strengthen the capacity of the laboratory network for TB microbiological diagnostics to detect all cases of the disease by rightsizing the number of level 1 and level 3 laboratories;
- ▶ Introduce anti-epidemic activities aimed at TB spread prevention at health care facilities, places of long-term stay and residence of TB patients, as well as strengthen infrastructure of TB facilities after their optimization;
- ▶ Improve the mechanism of providing patient-centered TB care;
- ▶ Uninterrupted provision of the health care facilities, that provide treatment to TB patients at inpatient and outpatient facilities, with TB drugs, in particular, extensive use of fixed-dose drugs;
- ▶ Improve the quality of directly observed treatment of TB by expanding the network of DOT stations at health care facilities and introducing elements of such treatment into the primary health care system;
- ▶ Ensure coordinated functioning of TB and HIV/AIDS systems on TB case detection, timely MDR-TB diagnostics, and extension of latent TB infection preventive treatment of people living with HIV/AIDS;
- ▶ Strengthen cooperation and coordination of the activities of the Ministry of Health of Ukraine, the National Academy of Medical Science of Ukraine, the Ministry of Social Policy of Ukraine, the Ministry of Education and Science, Youth and Sports of Ukraine, the State Penitentiary Service of Ukraine and civil society institutions in timely diagnostics and treatment of patients with tuberculosis, in particular, multidrug-resistant TB, of risk groups representatives, including homeless and prisoners, as well as organize directly observed treatment of patients with infectious tuberculosis released from prison;
- ▶ Modernize the system of inpatient care provision to detainees on suspicion in committing crimes and detainees with active form of TB;
- ▶ Modernize the system for monitoring and evaluation of the Program implementation, health facilities operation at the central and region-

al levels, in particular, train the relevant specialists, improve reporting forms and performance indicators, ensure the electronic TB patients register functioning;

- ▶ Involve civil organizations in active participation in TB control, ensure protection of the populations groups with limited access to health care, promote tolerance towards people with TB and HIV in the society and prevent their discrimination by the health care system;
- ▶ Promote creation of appropriate conditions for efficient realization of the capacity of associations of citizens acting in TB control and their further development;
- ▶ Improve the postgraduate education system in phthisiology and experience exchange at the national and international levels through establishing resource centers and updating curricula;
- ▶ Raise the public awareness level on TB prevention by arranging lectures, discussions, TV broadcasts, social advertising.

Table 1

The population of Ukraine as of January 1, 2017 (permanent). Health care workers of the facilities of the Ministry of Health of Ukraine, 2016											
No.	Administrative territories	Population						Health care workers of the MOH facilities of the MOH facilities* (individuals)*			
		Total		of them, individuals aged:		0-17 years old inclusive					
		rural population	including urban population	0-14 years old inclusive	15-17 years old inclusive						
1	AR Crimea	-	-	-	-	-	-	-			
2	Vynnytska	1 595 078	790 697	804 381	246 091	46 141	292 232	27 445			
3	Volynska	1 039 940	500 423	539 517	203 625	34 881	238 506	17 461			
4	Dnipropetrovska	3 251 575	535 481	2 716 094	494 514	77 103	571 617	56 146			
5	Donetska	1 965 436	306 028	1 659 408	264 861	47 298	312 159	29 641			
6	Zhytomyrska	1 248 318	516 791	731 527	205 112	36 898	242 010	21 873			
7	Zakarpatska	1 256 325	794 523	461 802	248 381	42 818	291 199	18 927			
8	Zaporizka	1 752 853	403 123	1 349 730	252 181	40 826	293 007	31 540			
9	Ivano-Frankivska	1 379 626	781 394	598 232	235 971	43 898	279 869	26 360			
10	Kyivska	1 726 456	659 495	1 066 961	279 602	42 841	322 443	28 885			
11	Kirovohradska	966 735	361 147	605 588	145 004	25 210	170 214	18 375			
12	Luhanska	712 139	202 406	509 733	92 388	17 308	109 696	10 611			
13	Lvovska	2 515 804	993 899	1 521 905	408 285	75 346	483 631	47 863			
14	Mykolajivska	1 157 492	369 794	787 698	178 120	30 352	208 472	17 582			
15	Odeska	2 379 229	800 144	1 579 085	392 589	62 369	454 958	37 051			
16	Poltavnska	1 431 110	551 167	879 943	198 934	35 905	234 839	25 695			
17	Rivnenska	1 160 751	613 066	547 685	235 706	41 320	277 026	21 349			
18	Sumska	1 111 064	351 913	759 151	146 102	28 210	174 312	21 119			
19	Ternopil'ska	1 062 458	591 907	470 551	168 769	32 793	201 562	19 543			
20	Kharkivska	2 702 980	530 224	2 172 756	364 344	61 421	425 765	44 533			
21	Khersonska	1 060 924	413 733	647 191	168 201	29 176	197 377	17 022			
22	Khmelnytska	1 291 250	567 058	724 192	202 270	36 412	238 682	21 927			
23	Cherkaska	1 239 336	538 785	700 551	171 967	32 071	204 038	22 489			
24	Chernivetska	906 828	519 994	386 834	155 277	30 038	185 315	15 532			
25	Chernihivska	1 036 433	371 375	665 058	139 499	25 263	164 762	20 734			
26	Kyiv City	2 865 262	0	2 865 262	446 711	64 576	511 287	51 792			
27	Sevastopol City	-	-	-	-	-	-	-			
Ukraine		42 590 879	13 244 724	29 346 155	6 494 293	1 119 713	7 614 006	671 495			

* The data are used from the form No. 20 "Health Care Facility Report" (HCF)

Table 2

TB health care facilities network of the MOH of Ukraine and the number of beds for TB patients, 2016 **													
No.	Administrative territories	TB dispensaries				Туберкульозні лікарні				Number of the facilities that have TB stations		TB sanatoriums	
		total	of them, those with inpatient units	number of beds	for adults	number of beds	for children	number of beds	total	number of beds			
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	1	1	400	1	30	0	0	30	5	275	-	-
3	Volynska	1	1	300	3	120	0	0	20	2	200	-	-
4	Dnipropetrovska	6	6	1 385	1	40	0	0	33	7	530	-	-
5	Donetska	6	6	750	0	0	0	0	21	2	450	-	-
6	Zhytomyrska	1	1	440	0	0	0	0	25	2	385	-	-
7	Zakarpatska	1	1	50	1	500	0	0	17	1	210	-	-
8	Zaporizka	7	3	805	1	50	0	0	19	1	50	-	-
9	Ivano-Frankivska	7	7	660	0	0	0	0	15	4	980	-	-
10	Kyivska	2	2	340	1	100	0	0	26	1	210	-	-
11	Kirovohradska	4	3	140	1	320	0	0	17	2	190	-	-
12	Luhanska	2	2	130	0	0	0	0	16	1	50	-	-
13	Lvivska	9	8	915	2	130	0	0	18	3	305	-	-
14	Mykolajivska	2	1	540	0	0	0	0	22	1	201	-	-
15	Odeska	3	2	560	1	405	0	0	33	7	1 720	-	-
16	Poltavska	3	3	419	2	140	0	0	25	3	230	-	-
17	Rivnenska	1	1	370	3	130	0	0	18	2	165	-	-
18	Sumska	2	2	310	0	0	0	0	21	1	110	-	-
19	Terнопilska	4	4	335	1	30	0	0	23	2	130	-	-
20	Kharkivska	7	3	360	3	260	0	0	26	6	440	-	-
21	Khersonska	1	1	400	2	160	1	60	23	1	65	-	-
22	Khmelnytska	2	1	230	2	100	0	0	25	2	110	-	-
23	Cherkaska	1	1	480	0	0	0	0	25	1	160	-	-
24	Chernivetska	2	2	220	0	0	0	0	13	2	267	-	-
25	Chernihivska	3	2	530	1	40	0	0	21	1	100	-	-
26	Kyiv City	2	1	120	2	565	1	130	4	1	300	-	-
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine		80	65	11 189	28	3 120	2	190	536	61	7 833		

* The data are used from the form No. 47-zdorov "Report on Health Care Facilities Network and Their Activities"

Table 3

Availability of beds for TB patients at health care facilities of MOH of Ukraine *													
No.	Administrative territories	Absolute number					Per 10,000 people						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	860	860	-	-	-	4,4	4,4	-	-	-		
2	Vynnytska	645	645	595	520	430	4,0	4,0	3,71	3,26	2,72		
3	Volynska	600	600	600	540	420	5,8	5,8	5,77	5,19	4,05		
4	Dnipropetrovska	1670	1640	1640	1545	1475	5,1	5,0	5,01	4,75	4,57		
5	Donetska	2330	2330	750	750	750	5,3	5,4	1,75	3,82	3,85		
6	Zhytomyrska	500	500	480	460	440	3,9	4,0	3,82	3,69	3,54		
7	Zakarpatska	875	767	767	719	640	7,0	6,1	6,10	5,72	5,10		
8	Zaporizka	950	935	935	895	855	5,3	5,3	5,30	5,11	4,92		
9	Ivano-Frankivska	680	580	580	580	570	4,9	4,2	4,20	4,20	4,14		
10	Kyvska	705	570	560	465	440	4,1	3,3	3,25	2,69	2,55		
11	Kirovohradska	499	499	497	497	480	5,1	5,1	5,10	5,14	5,00		
12	Lunanska	1120	1085	130	130	130	5,0	4,9	0,59	1,81	1,83		
13	Lvvska	1470	1457	1420	1110	895	5,8	5,8	5,64	4,41	3,56		
14	Mykolajivska	564	564	564	554	499	4,8	4,8	4,85	4,79	4,34		
15	Odeska	1340	1325	1165	1165	1025	5,6	5,6	4,88	4,90	4,31		
16	Poltavska	824	749	649	604	559	5,6	5,2	4,50	4,22	3,94		
17	Rivnenska	670	520	560	560	500	5,8	4,5	4,83	4,82	4,30		
18	Sumska	590	562	452	385	335	5,2	5,0	4,03	3,47	3,04		
19	Ternopil'ska	550	500	500	500	365	5,1	4,7	4,69	4,71	3,46		
20	Kharkiv'ska	1060	1060	945	845	720	3,9	3,9	3,48	3,13	2,68		
21	Kherson'ska	880	740	710	650	620	8,2	6,9	6,66	6,13	5,88		
22	Khmelnytska	515	503	420	355	305	3,9	3,9	3,24	2,75	2,38		
23	Cherkaska	520	520	520	500	480	4,1	4,1	4,17	4,03	3,91		
24	Chernivetska	410	335	280	280	260	4,5	3,7	3,09	3,09	2,87		
25	Chernihiv'ska	710	670	615	580	545	6,6	6,3	5,87	5,60	5,32		
26	Kyiv City	950	950	950	810	810	3,4	3,4	3,34	2,83	2,81		
27	Sevastopol City	235	235	-	-	-	6,2	6,1	-	-	-		
Ukraine		22722	21701	17284	15999	14548	5,0	4,8	4,04	3,76	3,43		

* The data are used from the form No. 47-zdorov "Report on Health Care Facilities Network and Their Activities"

Table 4

Показники використання ліжкового фонду протитуберкульозних закладів охорони здоров'я системи МОЗ України, 2016 рік *														
No.	Administrative territories	Average number of bed occupancy days			Average bed stay			Mortality			Bed turn-over			
		total	for adults	for children	total	for adults	for children	total	for adults	for children	total	for adults	for children	
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	247,4	239,8	350,6	66,9	65,3	86,9	5,2	5,7	0,00	3,7	3,67	4,03	
3	Volynska	272,9	275,0	247,1	102,0	101,3	111,8	6,6	7,0	0,00	2,7	2,71	2,21	
4	Dnipropetrovska	266,6	266,9	259,9	94,2	93,1	125,5	11,9	12,3	0,00	2,8	2,87	2,07	
5	Donezka	286,7	286,7	0,0	105,5	105,5	0,0	12,7	12,7	0,00	2,7	2,72	0,00	
6	Zhytomyrska	256,5	251,1	331,2	76,3	81,8	44,8	5,2	6,1	0,00	3,4	3,07	7,40	
7	Zakarpatska	285,7	283,1	436,2	87,6	87,8	80,5	6,8	7,0	0,00	3,3	3,22	5,42	
8	Zaporizka	268,8	264,6	321,2	113,3	109,8	166,8	6,6	7,0	0,00	2,4	2,41	1,93	
9	Ivano-Frankivska	280,6	278,6	318,0	93,5	99,7	47,0	3,8	4,3	0,00	3,0	2,79	6,77	
10	Kyivska	286,6	288,9	243,4	105,0	103,7	146,1	9,7	10,0	0,00	2,7	2,79	1,67	
11	Kirovohradska	230,5	232,9	185,7	95,0	96,6	68,3	9,7	10,3	0,00	2,4	2,41	2,72	
12	Luhanska	322,6	322,6	0,0	125,7	125,7	0,0	11,7	11,7	0,00	2,6	2,57	0,00	
13	Lvivska	270,5	274,5	202,1	72,0	70,7	129,5	6,8	6,9	0,00	3,8	3,88	1,56	
14	Mykolajivska	328,5	335,6	244,0	112,3	111,3	131,9	13,3	13,9	0,00	2,9	3,01	1,85	
15	Odeska	303,2	305,2	252,9	97,6	96,9	124,9	13,3	13,6	0,00	3,1	3,15	2,03	
16	Poltavska	240,0	236,5	296,0	110,6	136,5	32,4	7,8	10,4	0,00	2,2	1,73	9,14	
17	Rivnenska	202,3	208,3	98,5	86,1	86,8	65,7	6,0	6,2	0,00	2,4	2,40	1,50	
18	Sumska	189,4	184,6	252,0	80,1	84,2	54,8	10,4	12,0	0,00	2,4	2,19	4,60	
19	Ternopil'ska	327,4	333,9	94,7	68,9	68,7	94,7	4,2	4,3	0,00	4,8	4,86	1,00	
20	Kharkivska	245,2	243,0	276,5	83,2	80,6	139,5	6,3	6,6	0,00	3,0	3,01	1,98	
21	Khersonska	327,4	327,5	326,6	94,9	95,7	88,3	7,8	8,7	0,00	3,5	3,42	3,70	
22	Khmelnytska	278,4	284,5	202,4	92,9	93,5	83,0	5,0	5,3	0,00	3,0	3,04	2,44	
23	Cherkaska	313,1	317,0	252,7	93,8	95,2	72,9	6,4	6,8	0,00	3,3	3,33	3,47	
24	Chernivetska	217,4	217,4	0,0	100,5	100,5	0,0	6,7	6,7	0,00	2,2	2,16	0,00	
25	Chernihivska	280,4	280,1	285,4	90,1	88,4	118,9	6,4	6,7	0,00	3,1	3,17	2,40	
26	Kyiv City	165,3	162,1	181,9	92,0	98,5	70,2	11,7	15,2	0,00	1,8	1,65	2,59	
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	
Ukraine		267,2	268,0	254,3	91,9	92,4	83,5	8,3	8,9	0,00	2,9	2,90	3,05	

* The data are used from the form No. 47-zdorov "Report on Health Care Facilities Network and Their Activities"

Table 5

No.	Administrative territories	Number of laboratories at health care facilities in Ukraine *									
		Microscopy site for TB diagnostics at a HCF (Level I)		Microbiological laboratory (or microbiological unit of the clinical laboratory) at a TB facility (Level II)		Microbiological laboratory for TB diagnostics at a TB facility (Level III)					
		2015	2016	2015	2016	2015	2016				
1	AR Crimea	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	33	32	5	2	1	1	1	1	1	1
3	Volyńska	20	20	1	1	1	1	1	1	1	1
4	Dnipropetrovska	47	47	4	4	4	2	2	2	2	2
5	Donecka	14	24	4	2	2	2	2	2	2	2
6	Zhytomyrska	30	30	0	0	0	1	1	1	1	1
7	Zakarpatska	28	28	4	4	4	1	1	1	1	1
8	Zaporizka	35	35	2	2	2	1	1	1	1	1
9	Ivano-Frankivska	27	26	4	4	4	1	1	1	1	1
10	Kyivska	30	28	2	2	2	1	1	1	1	1
11	Kirovohradska	29	29	2	2	2	1	1	1	1	1
12	Luhanska	19	17	1	1	0	0	0	0	0	0
13	Lvivska	41	40	6	6	6	1	1	1	1	1
14	Mykolajivska	30	30	0	0	0	1	1	1	1	1
15	Odeska	46	46	2	1	1	1	1	1	1	1
16	Poltavska	31	31	3	3	3	1	1	1	1	1
17	Rivnenska	20	20	2	2	2	1	1	1	1	1
18	Sumska	33	27	4	3	3	1	1	1	1	1
19	Terнопilська	23	23	4	4	4	1	1	1	1	1
20	Kharkivska	40	40	5	5	5	1	1	1	1	1
21	Khersonska	24	24	3	3	3	1	1	1	1	1
22	Khmelnytska	24	24	2	2	2	1	1	1	1	1
23	Cherkaska	26	27	1	0	0	1	1	1	1	1
24	Chernivetska	11	11	2	2	2	1	1	1	1	1
25	Chernihivska	29	29	3	3	3	1	1	1	1	1
26	Kyiv City	15	15	2	2	2	1	1	1	1	1
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-
Ukraine		705	703	68	59	26	26	26	26	26	26

The data submitted by HCFs as per MOH of Ukraine Order No. 1265, dated 21.11.2016

Table 6

TB specialists staffing at the facilities of the MOH of Ukraine system *													
No.	Administrative territories	Absolute number						Per 10,000 people					
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017
1	AR Crimea	144	141	-	-	-	-	0,7	0,7	-	-	-	-
2	Vynnytska	99	92	96	91	88	88	0,6	0,6	0,60	0,57	0,56	0,56
3	Volyńska	58	52	55	53	54	54	0,6	0,5	0,53	0,51	0,52	0,52
4	Dnipropetrovska	182	177	171	167	157	157	0,6	0,5	0,52	0,51	0,49	0,49
5	Donetska	221	222	74	85	69	69	0,5	0,5	0,17	0,43	0,35	0,35
6	Zhytomyrska	65	65	65	69	62	62	0,5	0,5	0,52	0,55	0,50	0,50
7	Zakarpatska	95	93	94	91	84	84	0,8	0,7	0,75	0,72	0,67	0,67
8	Zaporizka	113	113	113	110	108	108	0,6	0,6	0,64	0,63	0,62	0,62
9	Ivano-Frankivska	120	124	132	130	135	135	0,9	0,9	0,96	0,94	0,98	0,98
10	Kyivska	74	71	78	78	75	75	0,4	0,4	0,45	0,45	0,43	0,43
11	Kirovohradska	48	50	51	52	48	48	0,5	0,5	0,52	0,54	0,50	0,50
12	Luhanska	136	140	22	25	25	25	0,6	0,6	0,10	0,35	0,35	0,35
13	Lvivska	186	178	181	181	179	179	0,7	0,7	0,72	0,72	0,71	0,71
14	Mykolajivska	63	64	65	61	61	61	0,5	0,6	0,56	0,53	0,53	0,53
15	Odeska	153	152	165	163	158	158	0,6	0,6	0,69	0,69	0,67	0,67
16	Poltavska	93	93	90	85	86	86	0,6	0,6	0,62	0,59	0,61	0,61
17	Rivnenska	60	59	66	65	65	65	0,5	0,5	0,57	0,56	0,56	0,56
18	Sumska	70	65	63	60	63	63	0,6	0,6	0,56	0,54	0,57	0,57
19	Terнопільська	83	85	79	77	73	73	0,8	0,8	0,74	0,72	0,69	0,69
20	Kharkivska	165	169	165	161	162	162	0,6	0,6	0,61	0,60	0,60	0,60
21	Khersonska	67	60	63	59	58	58	0,6	0,6	0,59	0,56	0,55	0,55
22	Khmelnyrska	75	77	83	81	82	82	0,6	0,6	0,64	0,63	0,64	0,64
23	Cherkaska	62	60	61	59	53	53	0,5	0,5	0,49	0,48	0,43	0,43
24	Chernivetska	70	73	68	65	67	67	0,8	0,8	0,75	0,72	0,74	0,74
25	Chernihivska	62	60	60	63	63	63	0,6	0,6	0,57	0,61	0,61	0,61
26	Kyiv City	128	125	117	112	113	113	0,5	0,4	0,41	0,39	0,39	0,39
27	Sevastopol City	22	21	-	-	-	-	0,6	0,6	-	-	-	-
Ukraine		2714	2 681	2 277	2 243	2 188	2 188	0,6	0,6	0,53	0,53	0,52	0,52

* The data are used from the form No. 17 "Report on Health Care Staff"

Table 7

Certification of TB specialists at the facilities of the MOH of Ukraine system, 2016 *						
No.	Administrative territories	Number of individual TB specialists	of them, those having proficiency category	including		% of those certified vs. total number of TB specialists
				highest	I II	
1	AR Crimea	-	-	-	-	-
2	Vinnytska	88	75	19	9	85,2
3	Volyńska	54	45	7	4	83,3
4	Dnipropetrovska	157	121	44	18	77,1
5	Donetska	69	58	18	12	84,1
6	Zhytomyrska	62	41	10	5	66,1
7	Zakarpatska	84	69	13	11	82,1
8	Zaporizka	108	87	35	14	80,6
9	Ivano-Frankivska	135	99	25	17	73,3
10	Kyivska	75	53	16	10	70,7
11	Kirovohradska	48	33	17	7	68,8
12	Luhanska	25	19	9	8	76,0
13	Lvivska	179	142	105	17	79,3
14	Mykolajivska	61	45	17	8	73,8
15	Odeska	158	121	94	9	76,6
16	Poltavska	86	66	29	14	76,7
17	Rivnenska	65	52	42	5	80,0
18	Sumska	63	32	16	12	50,8
19	Teropiliska	73	60	40	11	82,2
20	Kharkivska	162	116	72	17	71,6
21	Khersonska	58	52	30	6	89,7
22	Khmelnyvska	82	63	12	12	76,8
23	Cherkaska	53	43	25	1	81,1
24	Chernivetska	67	47	19	14	70,1
25	Chernihivska	63	46	21	5	73,0
26	Kyiv City	113	75	45	12	66,4
27	Sevastopol City	-	-	-	-	-
Ukraine		2 188	1 660	939	463	75,9

* The data are used from the form No. 17 "Report on Health Care Staff"

Table 8

No.	Administrative territories	Medical positions at the health-care facilities of the MOH of Ukraine system, 2016 *									
		In health care facilities					In TB facilities				
		Total therapists authorized staff number	TB specialists staffing by individuals	Staffing %	Total TB specialists authorized staff number	TB specialists staffing by individuals	Staffing %	Total nurses authorized staff number	Staffing % including combine jobs		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	85,00	67	78,82	69,00	50	72,46	181,00	85,77		
3	Volynska	65,00	51	78,46	65,25	50	76,63	154,50	100,00		
4	Dnipropetrovska	222,75	139	62,40	278,00	176	63,31	612,00	91,26		
5	Donetska	128,50	63	49,03	134,00	68	50,75	289,25	92,57		
6	Zhytomyrska	98,00	60	61,22	71,25	42	58,95	166,50	86,94		
7	Zakarpatska	89,00	77	86,52	12,25	11	89,80	21,75	100,00		
8	Zaporizka	162,50	107	65,85	200,50	132	65,84	408,75	91,87		
9	Ivano-Frankivska	124,75	123	98,60	146,00	138	94,52	357,75	97,90		
10	Kyivska	118,00	71	60,17	80,50	46	57,14	169,00	84,76		
11	Kirovohradska	75,75	45	59,41	62,50	32	51,20	114,50	89,30		
12	Luhanska	57,25	25	43,67	42,75	13	30,41	69,00	68,84		
13	Lvivska	168,50	150	89,02	261,75	218	83,29	454,25	98,79		
14	Mykolajivska	104,00	64	61,54	95,75	55	57,44	202,25	98,15		
15	Odeska	169,50	126	74,34	160,25	116	72,39	306,25	82,37		
16	Poltavska	94,00	74	78,72	95,00	70	73,68	208,50	89,81		
17	Rivnenska	75,75	63	83,17	77,50	57	73,55	170,00	98,53		
18	Sumska	76,25	62	81,31	59,00	42	71,19	140,00	98,57		
19	Ternopilska	73,25	68	92,83	88,25	79	89,52	186,50	95,98		
20	Kharkivska	191,00	140	73,30	190,25	132	69,38	305,00	94,84		
21	Khersonska	92,00	61	66,30	65,75	38	57,79	159,00	90,09		
22	Khmelnyvska	82,50	77	93,33	62,75	56	89,24	121,50	99,59		
23	Cherkaska	82,75	55	66,47	79,50	47	59,12	194,00	100,00		
24	Chernivetska	51,50	48	93,20	58,00	48	82,76	107,50	96,51		
25	Chernihivska	81,50	62	76,07	104,50	72	68,90	243,75	94,56		
26	Kyiv City	137,25	89	64,85	110,00	63	57,27	132,50	70,75		
27	Sevastopol City	-	-	-	-	-	-	-	-		
Ukraine		2 706,25	1 967	72,68	2 670,25	1 851	69,32	5 475,00	92,57		

* The data are used from the form No. 47 "Report on Health Care Facilities Network and Their Activities"

Table 9

No.	Names of ministries and agencies	TB specialists staffing at the health care facilities of Ukraine in the context of ministries and agencies *										
		2015					2016					
		Positions of TB specialists (abs. numbers)		Staffing (%)	Combine jobs ratio	Staffing by individuals (%)	Positions of TB specialists (abs. numbers)		Staffing (%)	Regular staff by individuals	Combine jobs ratio	Staffing by individuals (%)
Authorised staff number	Regular staff members	Authorised staff number	Regular staff members									
1	Ministry of Health of Ukraine	2784,00	2414,00	86,7	2015	2706,25	2351,75	86,9	1967	1,20	72,4	72,7
2	Academy of Medical Sciences of Ukraine	20,75	17,00	81,9	9	20,75	17,00	81,9	16	1,89	43,4	77,1
3	Ministry of Transport and Communications of Ukraine	9,25	8,25	89,2	8	9,25	7,50	81,1	6	1,03	86,5	64,9
4	Ministry of Interior of Ukraine	1,00	1,00	100,0	1	1,00	1,00	100,0	1	1,00	100,0	100,0
5	Ministry of Defence of Ukraine	6,00	6,00	100,0	6	9,00	8,00	88,9	8	1,00	100,0	88,9
6	State Criminal Execution Service of the Ministry of Justice of Ukraine	94,5	71,75	75,9	73	41,50	32,00	77,1	31	0,98	77,2	74,7
7	Private institutions	2,75	2,75	100,0	2	4,50	4,25	94,4	1	1,38	72,7	22,2
8	All other agencies	0,25	0,25	100,0	0	0,25	0,25	100,0	0	0,00	0,0	0,0
Ukraine		2918,50	2521,00	86,4	2114	2792,50	2421,75	86,7	2030	1,19	72,4	72,7

* The data are used from the form No. 20 "Health Care Facility Report" with the exception of MOH of Ukraine - the data are used from the form No. 47-zdorov "Report on Health Care Facilities Network and Their Activities"

Table 10

No.	Administrative territories	Rates of preventive examinations for TB detection in health care facilities *													
		X-ray examination (per 100 people over 15 years of age)							Tuberculin diagnostics (per 100 children aged 0-14 years inclusive)						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015
1	AR Crimea	48,2	54,8	-	-	-	74,0	54,6	-	-	54,6	-	-	-	-
2	Vynnytska	47,3	53,1	45,6	46,2	44,7	35,9	28,3	34,4	32,1	22,8	34,4	32,1	22,8	
3	Volynska	42,3	49,1	43,9	43,6	43,2	45,1	17,3	13,9	20,9	20,3	13,9	20,9	20,3	
4	Dnipropetrovska	60,1	65,8	61,0	63,6	62,3	84,6	78,7	74,5	81,4	79,9	74,5	81,4	79,9	
5	Donezka	45,7	51,4	19,7	39,2	40,5	74,1	42,1	27,3	45,7	51,5	27,3	45,7	51,5	
6	Zhytomyrska	54,0	58,7	57,0	53,9	54,9	81,5	44,1	53,1	48,1	51,0	53,1	48,1	51,0	
7	Zakarpatzka	62,3	66,0	62,4	66,2	58,4	80,2	78,8	51,1	59,1	40,7	51,1	59,1	40,7	
8	Zaporizka	46,6	51,5	46,4	46,6	46,4	61,8	46,5	40,0	39,3	47,2	40,0	39,3	47,2	
9	Ivano-Frankivska	48,5	51,6	49,2	48,1	47,6	79,3	52,3	31,5	42,8	22,2	31,5	42,8	22,2	
10	Kyivska	39,6	43,6	41,8	41,9	42,9	41,3	29,3	19,4	23,8	28,1	19,4	23,8	28,1	
11	Kirovohradska	57,5	65,8	64,8	66,6	65,8	94,7	90,6	73,8	77,0	79,8	73,8	77,0	79,8	
12	Luhanska	66,0	72,4	17,1	54,6	57,2	77,2	37,6	9,5	35,4	43,0	9,5	35,4	43,0	
13	Lvivska	44,3	46,4	44,0	43,9	42,8	32,1	13,1	6,3	12,3	12,8	6,3	12,3	12,8	
14	Mykolajivska	69,9	78,0	68,3	70,0	71,1	77,8	37,9	49,3	64,1	65,0	49,3	64,1	65,0	
15	Odeska	44,0	50,1	46,0	42,2	45,9	77,4	39,1	28,1	42,4	32,4	28,1	42,4	32,4	
16	Poltavska	52,0	52,0	46,5	48,2	44,8	55,5	50,1	47,1	45,2	41,6	47,1	45,2	41,6	
17	Rivnenska	40,5	48,1	48,5	45,3	39,4	46,2	26,7	28,9	19,6	21,7	28,9	19,6	21,7	
18	Sumska	57,2	67,4	59,4	61,0	58,0	90,8	85,4	85,0	84,7	77,9	85,0	84,7	77,9	
19	Teropilzka	47,3	49,3	50,0	48,5	50,7	49,7	25,8	17,6	19,0	17,8	17,6	19,0	17,8	
20	Kharkivska	48,9	52,4	50,1	49,0	49,3	74,4	49,0	43,3	58,5	48,8	43,3	58,5	48,8	
21	Khersonska	58,7	65,3	60,1	60,6	60,4	64,3	45,0	45,6	61,4	54,9	45,6	61,4	54,9	
22	Khmelnytska	61,0	64,3	59,1	59,2	56,1	80,4	39,9	45,4	52,8	52,1	45,4	52,8	52,1	
23	Cherkaska	54,5	59,1	58,9	57,5	56,8	82,9	55,3	47,9	57,9	56,5	47,9	57,9	56,5	
24	Chernivetska	45,1	59,3	58,7	57,6	55,9	53,5	35,4	33,3	45,4	45,8	33,3	45,4	45,8	
25	Chernihivska	46,9	51,7	49,0	49,2	50,2	73,4	57,0	52,8	53,9	52,6	52,8	53,9	52,6	
26	Kyiv City	51,9	54,9	44,3	43,8	43,9	32,5	15,2	5,1	26,5	42,3	5,1	26,5	42,3	
27	Sevastopol City	65,8	49,3	-	-	-	49,4	47,2	-	-	-	-	-	-	
	Ukraine	51,4	56,3	46,6	46,4	45,9	64,6	43,4	36,6	44,6	43,3	36,6	44,6	43,3	

* The data are used from the form No. 20 "Health Care Facility Report"

Table 11

No.	Administrative territories	Preventive vaccination of children in the first year of life, at the age of 7 years and older *													
		BCG (for children under 1 year of age)						BCG re-vaccination (for children aged 7 and older)							
		were subject to vaccination			were vaccinated			%			number of persons				
		2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	17988	17208	4708	12260	27,1	71,2	2796	2743	58	895	2,1	32,6	2,1	32,6
3	Volynska	15507	15210	2541	8272	16,4	54,4	6198	7427	0	1754	0	23,6	0	23,6
4	Dnipropetrovska	38476	36522	11012	21969	28,6	60,2	7400	8476	0	3620	0	42,7	0	42,7
5	Donezka	16933	13953	7232	10673	42,7	76,5	3988	3723	107	1136	2,7	30,5	2,7	30,5
6	Zhytomyrska	17080	14765	5877	11138	34,4	75,4	1083	1292	476	783	43,9	60,6	43,9	60,6
7	Zakarpatska	18056	16309	6846	11225	37,9	68,8	6377	5919	172	2562	2,7	43,3	2,7	43,3
8	Zaporizka	17576	16783	7827	12677	44,5	75,5	9546	9612	1	1133	0,01	11,8	0,01	11,8
9	Ivano-Frankivska	23221	19996	6855	11421	29,5	57,1	3435	3557	160	392	4,7	11,0	4,7	11,0
10	Kyivska	17777	16278	7360	13311	41,4	81,8	5334	5817	335	2732	6,3	47,0	6,3	47,0
11	Kirovohradska	11361	10657	5902	8655	51,9	81,2	4030	3536	659	2555	16,3	72,3	16,3	72,3
12	Luhanska	5124	5008	4018	3609	78,4	72,1	637	809	104	211	16,3	26,1	16,3	26,1
13	Lvivska	44233	39307	6721	19677	15,4	50,1	13497	13945	737	2074	5,5	14,9	5,5	14,9
14	Mykolajivska	12874	12210	7852	10412	61,0	85,3	3481	4149	1906	3292	54,7	79,3	54,7	79,3
15	Odeska	28799	29858	11318	23592	39,3	79,0	6828	9010	146	3337	2,1	37,0	2,1	37,0
16	Poltavska	13953	13047	2303	10175	16,5	78,0	4933	7141	0	1382	0	19,4	0	19,4
17	Rivnenska	18485	15422	4680	12445	25,3	80,7	9354	10279	21	3462	0,22	33,7	0,22	33,7
18	Sumska	9750	8731	6623	8058	67,9	92,3	2714	2270	683	1213	25,2	53,4	25,2	53,4
19	Terнопilська	11148	10705	1942	7201	17,4	67,3	4069	4479	318	1245	7,8	27,8	7,8	27,8
20	Xarkivska	27688	27199	20199	18679	72,9	68,7	5340	5483	1550	1767	29	32,2	29	32,2
21	Xersonska	12300	10053	6350	9583	51,6	95,3	4770	6143	892	1959	18,7	31,9	18,7	31,9
22	Xmelnytska	13797	12627	3288	11739	23,8	93,0	5045	5727	11	147	0,21	2,6	0,21	2,6
23	Xerkaska	12091	11839	8041	8858	66,5	74,8	2360	2395	1709	1181	72,4	49,3	72,4	49,3
24	Xernivetska	11664	10264	4452	8643	38,1	84,2	2578	3050	447	886	17,3	29,0	17,3	29,0
25	Xernihivska	10270	10024	6597	7329	64,2	73,1	2337	2770	651	1615	27,8	58,3	27,8	58,3
26	Kyiv City	39351	40299	25035	31990	63,6	79,4	1268	1472	62	273	4,9	18,5	4,9	18,5
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine		465502	434274	185579	313591	39,9	72,2	119398	131224	11205	41606	9,4	31,7	9,4	31,7

* According to the State Sanitary and Epidemiological Service of Ukraine

Table 13

No.	Administrative territories	TB incidence in Ukraine (new cases) *									
		Absolute number					Per 100,000 population				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
1	AR Crimea	1497	1492	-	-	-	76,6	76,3	-	-	-
2	Vynnytska	899	906	809	758	769	55,3	55,9	50,2	47,3	48,2
3	Volyńska	534	699	713	653	620	51,6	67,4	68,7	62,8	59,6
4	Dnipropetrovska	3082	3006	2600	2566	2 105	92,9	91,0	79,0	78,4	64,7
5	Donevska	3148	3111	2499	1086**	1172**	71,7	71,3	57,7	55,3***	59,6***
6	Zhytomyrska	880	865	853	830	780	69,1	68,1	67,5	66,0	62,5
7	Zakarpatska	726	716	731	749	765	58,2	57,2	58,3	59,6	60,9
8	Zaporizka	1243	1204	1144	1085	1 066	69,4	67,5	64,4	61,5	60,8
9	Ivano-Frankivska	959	959	882	845	718	69,6	69,5	63,9	61,2	52,0
10	Kyivska	1168	1183	1133	1194	1 280	68,2	68,9	65,9	69,3	74,1
11	Kirovohradska	775	763	774	747	648	77,8	77,2	78,9	76,7	67,0
12	Luhanska	1795	1769	248**	316**	370**	79,1	78,6	11,1***	43,9***	52,0***
13	Lvivska	1680	1636	1659	1509	1 557	66,6	64,9	65,8	59,9	61,9
14	Mykolajivska	1028	908	838	803	777	87,3	77,4	71,8	69,0	67,1
15	Odeska	2235	2162	2342	2446	2 594	94,0	90,7	98,2	102,5	109,0
16	Poltavska	889	878	796	789	799	60,5	60,1	54,9	54,7	55,8
17	Rivnenska	710	727	646	636	611	61,6	62,9	55,8	54,8	52,6
18	Sumska	651	645	612	623	615	56,6	56,5	54,1	55,6	55,4
19	Ternopil'ska	561	531	500	409	475	52,1	49,4	46,7	38,3	44,7
20	Kharkivska	1359	1221	1140	1182	1 163	49,8	44,7	41,9	43,5	43,0
21	Khersonska	1167	1036	904	875	799	107,9	96,2	84,4	82,0	75,3
22	Khmelnytska	680	727	748	724	690	51,6	55,5	57,4	55,8	53,4
23	Cherkaska	800	776	719	716	654	62,8	61,3	57,2	57,4	52,8
24	Chernivetska	438	415	366	364	273	48,5	45,9	40,4	40,1	30,1
25	Chernihivska	675	783	663	677	656	62,5	73,2	62,6	64,7	63,3
26	Kyiv City	1143	1473	1224	1314	1 336	41,2	52,5	43,3	46,2	46,6
27	Sevastopol City	236	228	-	-	-	62,2	59,8	-	-	-
Ukraine		30958	30819	25543	23896	23 292	68,1	67,9	59,5***	55,9****	54,7****

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

*** The calculation is based on the population of the controlled territories of Ukraine

**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 14

TB morbidity (new registered cases + relapses) among the general population in Ukraine *														
No.	Administrative territories	Absolute number						Per 100,000 population						
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	
1	AR Crimea	1 778	1 700	-	-	-	-	91,0	86,9	-	-	-	-	-
2	Vynnytska	1 120	1 056	979	972	977	977	68,8	65,2	60,8	60,6	60,6	61,3	
3	Volynska	593	770	859	878	818	818	57,2	74,2	82,7	84,4	84,4	78,7	
4	Dnipropetrovska	3 732	3 345	3 067	3 260	2 614	2 614	112,5	101,2	93,2	99,6	99,6	80,4	
5	Donetska	3 930	3 694	2 971	1 354**	1 413**	1 413**	89,5	84,7	68,6	68,9***	68,9***	71,9***	
6	Zhytomyrska	1 008	966	1 024	1 072	971	971	79,1	76,1	81,1	85,3	85,3	77,8	
7	Zakarpatska	775	767	825	843	875	875	62,1	61,3	65,8	67,1	67,1	69,6	
8	Zaporizka	1 570	1 427	1 429	1 397	1 350	1 350	87,7	80,0	80,5	79,1	79,1	77,0	
9	Ivano-Frankivska	1 067	1 072	1 034	1 086	914	914	77,5	77,7	75,0	78,7	78,7	66,2	
10	Kyivska	1 366	1 321	1 272	1 425	1 479	1 479	79,7	77,0	74,0	82,7	82,7	85,7	
11	Kirovohradska	943	873	966	899	768	768	94,7	88,3	98,5	92,3	92,3	79,4	
12	Luhanska	2 239	2 032	2 98**	3 87***	4 66**	4 66**	98,7	90,2	13,3****	53,8****	53,8****	65,4****	
13	Lvivska	1 922	1 928	2 005	2 026	2 012	2 012	76,2	76,4	79,6	80,4	80,4	80,0	
14	Mykolajivska	1 141	989	955	1 002	950	950	96,9	84,3	81,8	86,1	86,1	82,1	
15	Odeska	2 419	2 410	2 701	2 952	3 108	3 108	101,8	101,1	113,2	123,8	123,8	130,6	
16	Poltavska	1 056	1 031	1 065	1 051	996	996	71,9	70,6	73,4	72,9	72,9	69,6	
17	Rivnenska	845	830	797	804	772	772	73,3	71,8	68,8	69,3	69,3	66,5	
18	Sumska	815	749	787	823	800	800	70,9	65,6	69,6	73,4	73,4	72,0	
19	Ternopil'ska	668	634	617	534	608	608	62,0	59,0	57,7	50,1	50,1	57,2	
20	Kharkivska	1 676	1 425	1 319	1 451	1 419	1 419	61,5	52,2	48,5	53,4	53,4	52,5	
21	Khersonska	1 239	1 158	1 090	1 132	1 051	1 051	114,5	107,5	101,8	106,1	106,1	99,1	
22	Khmelnytska	819	843	910	953	881	881	62,2	64,3	69,8	73,4	73,4	68,2	
23	Cherkaska	934	890	870	914	826	826	73,3	70,3	69,2	73,2	73,2	66,6	
24	Chernivetska	526	475	488	495	361	361	58,3	52,5	53,9	54,6	54,6	39,8	
25	Chernihivska	824	937	848	907	865	865	76,3	87,6	80,1	86,6	86,6	83,5	
26	Kyiv City	1 323	1 591	1 392	1 534	1 506	1 506	47,7	56,7	49,2	53,9	53,9	52,6	
27	Sevastopol City	266	250	-	-	-	-	70,1	65,5	-	-	-	-	
	Ukraine	36 594	35 163	30 568	30 151	28 800	28 800	80,5	77,5	71,2****	70,5****	70,5****	67,6****	

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

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Table 15

No.	Administrative territories	Pulmonary TB morbidity (new registered cases + relapses) among the general population in Ukraine *												
		Absolute number						Per 100,000 population						
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	
1	AR Crimea	1 566	1 535	-	-	-	-	80,1	78,5	-	-	-	-	
2	Vynnytska	1 007	981	907	890	881	81,9	61,9	60,6	56,3	55,5	55,5	55,2	
3	Volyńska	495	644	735	723	710	47,8	47,8	62,1	70,8	69,5	68,3	68,3	
4	Dnipropetrovska	3 250	2 963	2 676	2 805	2 249	98,0	98,0	89,7	81,4	85,7	69,2	69,2	
5	Donevska	3 610	3 410	2 760	1 237**	1 331**	82,2	82,2	78,2	63,7	62,9***	67,7***	67,7***	
6	Zhytomyrska	901	850	917	954	868	70,7	70,7	66,9	72,6	75,9	69,5	69,5	
7	Zakarpatska	744	740	800	807	847	59,6	59,6	59,1	63,8	64,2	67,4	67,4	
8	Zaporizka	1 466	1 331	1 321	1 277	1 214	81,9	81,9	74,6	74,4	72,3	69,3	69,3	
9	Ivano-Frankivska	955	987	929	993	827	69,3	69,3	71,6	67,3	72,0	72,0	72,0	
10	Kyivska	1 239	1 191	1 104	1 224	1 200	72,3	72,3	69,4	64,2	71,0	69,5	69,5	
11	Kirovohradska	895	824	925	858	709	89,9	89,9	83,3	94,3	88,1	73,3	73,3	
12	Luhanska	1 919	1 808	2 62**	357**	448**	84,6	84,6	80,3	11,7***	49,6***	62,9***	62,9***	
13	Lvivska	1 662	1 753	1 783	1 838	1 779	65,9	65,9	69,5	70,8	73,0	70,7	70,7	
14	Mykolajivska	991	870	860	920	866	84,2	84,2	74,2	73,7	79,1	74,8	74,8	
15	Odeska	2 190	2 255	2 470	2 663	2 837	92,1	92,1	94,6	103,5	111,6	119,2	119,2	
16	Poltavska	988	966	1 028	997	941	67,2	67,2	66,2	70,9	69,2	65,8	65,8	
17	Rivnenska	721	718	706	710	688	62,5	62,5	62,1	61,0	61,2	59,3	59,3	
18	Sumska	728	668	708	735	723	63,3	63,3	58,5	62,6	65,6	65,1	65,1	
19	Terнопil'ska	592	566	559	487	548	55,0	55,0	52,7	52,2	45,7	51,6	51,6	
20	Kharkivska	1 564	1 317	1 206	1 356	1 312	57,4	57,4	48,3	44,3	49,9	48,5	48,5	
21	Khersonska	1 144	1 072	1 011	1 043	974	105,7	105,7	99,6	94,4	97,8	91,8	91,8	
22	Khmel'nytska	722	751	805	847	779	54,8	54,8	57,3	61,7	65,3	60,3	60,3	
23	Cherkaska	741	727	707	748	663	58,2	58,2	57,5	56,3	59,9	53,5	53,5	
24	Chernivetska	478	428	442	443	327	53,0	53,0	47,3	48,8	48,8	36,1	36,1	
25	Chernihivska	763	859	795	843	793	70,7	70,7	80,3	75,1	80,5	76,5	76,5	
26	Kyiv City	1 218	1 419	1 248	1 332	1 317	43,9	43,9	50,6	44,1	46,8	46,0	46,0	
27	Sevastopol City	223	213	-	-	-	58,8	58,8	55,8	-	-	-	-	
	Ukraine	32 772	31 846	27 664	27 087	25 831	72,1	72,1	70,2	64,5***	63,3***	60,6****	60,6****	

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Table 16

TB morbidity with bacterioexcretion (new registered cases + relapses) among the general population in Ukraine *												
No.	Administrative territories	Absolute number					Per 100,000 population					
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	
1	AR Crimea	822	918	-	-	-	42,1	46,9	-	-	-	
2	Vynnytska	553	658	610	609	590	34,0	40,6	37,9	38,0	37,0	
3	Volynska	298	352	439	578	581	28,8	33,9	42,3	55,6	55,9	
4	Dnipropetrovska	1 524	1 625	1 592	1 607	1 352	45,9	49,2	48,4	49,1	41,6	
5	Donetska	2 188	2 243	1 691	795**	846**	49,8	51,4	39,0	40,4***	43,0***	
6	Zhytomyrska	536	553	678	687	645	42,1	43,6	53,7	54,7	51,7	
7	Zakarpatska	415	443	539	614	640	33,3	35,4	43,0	48,9	50,9	
8	Zaporizka	762	857	855	798	826	42,5	48,0	48,2	45,2	47,1	
9	Ivano-Frankivska	318	562	522	570	539	23,1	40,8	37,8	41,3	39,1	
10	Kyivska	559	620	642	771	752	32,6	36,1	37,3	44,7	43,6	
11	Kirovohradska	492	530	686	673	548	49,4	53,6	69,9	69,1	56,7	
12	Luhanska	973	1 058	147**	192**	284**	42,9	47,0	6,6***	26,7***	39,9***	
13	Lvivska	756	959	909	1 085	1 067	30,0	38,0	36,1	43,1	42,4	
14	Mykolajivska	475	583	591	615	594	40,3	49,7	50,6	52,9	51,3	
15	Odeska	1 218	1 499	1 607	1 806	1 869	51,2	62,9	67,4	75,7	78,6	
16	Poltavska	425	529	664	644	610	28,9	36,2	45,8	44,7	42,6	
17	Rivnenska	378	414	490	510	509	32,8	35,8	42,3	44,0	43,9	
18	Sumska	408	475	499	555	571	35,5	41,6	44,1	49,5	51,4	
19	Terнопilська	298	341	327	308	340	27,7	31,7	30,6	28,9	32,0	
20	Kharkivska	907	919	793	957	932	33,3	33,7	29,1	35,2	34,5	
21	Khersonska	516	586	636	738	723	47,7	54,4	59,4	69,2	68,1	
22	Khmelnytska	344	412	436	510	423	26,1	31,4	33,4	39,3	32,8	
23	Cherkaska	371	418	470	523	485	29,1	33,0	37,4	41,9	39,1	
24	Chernivetska	266	281	298	362	270	29,5	31,1	32,9	39,9	29,8	
25	Chernihivska	514	657	600	595	559	47,6	61,4	56,7	56,8	53,9	
26	Kyiv City	762	851	755	844	816	27,5	30,4	26,7	29,6	28,5	
27	Sevastopol City	127	130	-	-	-	33,5	34,1	-	-	-	
Ukraine		17 205	19 473	17 476	17 946	17 371	37,9	42,9	40,7***	42,0***	40,8***	

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

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**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 19

No.	Administrative territories	Absolute number					Per 100,000 of the respective population				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
1	AR Crimea	35	36	-	-	-	12,3	12,3	-	-	-
2	Vynnytska	17	14	7	12	13	7,0	5,8	2,9	4,9	5,3
3	Volynska	9	16	11	11	15	4,6	8,1	5,5	5,4	7,4
4	Dnipropetrovska	73	73	68	96	83	15,9	15,6	14,3	19,7	16,8
5	Donetska	51	62	43	23**	28**	9,4	11,3	7,7	8,7***	10,6***
6	Zhytomyrska	18	21	29	40	22	9,0	10,5	14,4	19,6	10,7
7	Zakarpatska	11	11	11	14	17	4,7	4,6	4,5	5,7	6,8
8	Zaporizka	19	20	20	32	60	8,0	8,3	8,2	12,8	23,8
9	Ivano-Frankivska	14	11	16	18	13	6,1	4,8	6,9	7,7	5,5
10	Kyivska	26	39	24	32	28	10,4	15,2	9,1	11,8	10,0
11	Kirovohradska	10	12	14	10	14	7,1	8,5	9,8	6,9	9,7
12	Luhanska	44	31	5**	14**	14**	16,0	11,1	1,8***	15,3***	15,2***
13	Lvivska	20	17	24	27	42	5,1	4,3	6,0	6,7	10,3
14	Mykolajivska	14	9	14	17	10	8,2	5,2	8,0	9,6	5,6
15	Odeska	32	27	34	35	44	8,9	7,3	9,0	9,1	11,2
16	Poltavska	4	6	6	8	10	2,1	3,1	3,1	4,1	5,0
17	Rivnenska	15	19	7	18	16	6,7	8,4	3,0	7,7	6,8
18	Sumska	5	6	6	13	16	3,5	4,1	4,1	8,9	11,0
19	Terнопilська	9	8	1	7	4	5,3	4,8	0,6	4,2	2,4
20	Kharkivska	30	33	47	37	23	8,9	9,6	13,4	10,3	6,3
21	Khersonska	34	37	20	25	22	21,1	22,7	12,2	15,0	13,1
22	Khmelnyrska	2	9	9	14	9	1,0	4,6	4,5	7,0	4,4
23	Cherkaska	22	17	15	17	21	12,9	10,0	8,8	9,9	12,2
24	Chernivetska	9	8	4	9	4	6,0	5,3	2,6	5,8	2,6
25	Chernihivska	12	9	6	18	14	8,7	6,5	4,3	12,9	10,0
26	Kyiv City	19	46	34	21	29	5,0	11,6	8,3	4,9	6,5
27	Sevastopol City	5	6	-	-	-	9,6	11,0	-	-	-
	Ukraine	559	603	475	568	571	8,6	9,1	7,5***	8,8****	8,8****

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Table 18

TB morbidity (new cases + relapses) by age and gender in Ukraine*												
No.	Age	Male						Female				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	
1	Under 1 year old	17	15	12	27	26	18	17	10	17	21	
2	1-4 years old	92	93	81	108	113	85	92	72	101	102	
3	5-9 years old	91	118	76	99	85	85	99	70	76	72	
4	10-14 years old	91	83	75	72	72	80	86	79	68	80	
5	15-17 years old	196	156	161	149	113	217	189	134	135	115	
6	18-24 years old	1 680	1420	1091	946	903	1 241	1025	758	723	654	
7	25-34 years old	6 438	5880	4937	4699	4199	3 002	2901	2422	2314	2284	
8	35-44 years old	6 950	6865	6414	6497	5999	2 349	2357	2115	2117	2124	
9	45-54 years old	5 574	5399	4736	4680	4331	1 506	1497	1254	1217	1323	
10	55-64 years old	3 086	3153	2752	2913	2997	920	980	825	830	791	
11	65 and older	1 565	1493	1335	1326	1357	1 311	1245	1166	1037	1039	
Total		25 780	24 675	21670	21516	20195	10 814	10 488	8905	8635	8605	

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

Table 19

No.	Administrative territories	Absolute number					Per 100,000 of the respective population				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
1	AR Crimea	35	36	-	-	-	12,3	12,3	-	-	-
2	Vynnytska	17	14	7	12	13	7,0	5,8	2,9	4,9	5,3
3	Volynska	9	16	11	11	15	4,6	8,1	5,5	5,4	7,4
4	Dnipropetrovska	73	73	68	96	83	15,9	15,6	14,3	19,7	16,8
5	Donetska	51	62	43	23**	28**	9,4	11,3	7,7	8,7***	10,6***
6	Zhytomyrska	18	21	29	40	22	9,0	10,5	14,4	19,6	10,7
7	Zakarpatska	11	11	11	14	17	4,7	4,6	4,5	5,7	6,8
8	Zaporizka	19	20	20	32	60	8,0	8,3	8,2	12,8	23,8
9	Ivano-Frankivska	14	11	16	18	13	6,1	4,8	6,9	7,7	5,5
10	Kyivska	26	39	24	32	28	10,4	15,2	9,1	11,8	10,0
11	Kirovohradska	10	12	14	10	14	7,1	8,5	9,8	6,9	9,7
12	Luhanska	44	31	5**	14**	14**	16,0	11,1	1,8***	15,3***	15,2***
13	Lvivska	20	17	24	27	42	5,1	4,3	6,0	6,7	10,3
14	Mykolajivska	14	9	14	17	10	8,2	5,2	8,0	9,6	5,6
15	Odeska	32	27	34	35	44	8,9	7,3	9,0	9,1	11,2
16	Poltavska	4	6	6	8	10	2,1	3,1	3,1	4,1	5,0
17	Rivnenska	15	19	7	18	16	6,7	8,4	3,0	7,7	6,8
18	Sumska	5	6	6	13	16	3,5	4,1	4,1	8,9	11,0
19	Terнопilська	9	8	1	7	4	5,3	4,8	0,6	4,2	2,4
20	Kharkivska	30	33	47	37	23	8,9	9,6	13,4	10,3	6,3
21	Khersonska	34	37	20	25	22	21,1	22,7	12,2	15,0	13,1
22	Khmelnyrska	2	9	9	14	9	1,0	4,6	4,5	7,0	4,4
23	Cherkaska	22	17	15	17	21	12,9	10,0	8,8	9,9	12,2
24	Chernivetska	9	8	4	9	4	6,0	5,3	2,6	5,8	2,6
25	Chernihivska	12	9	6	18	14	8,7	6,5	4,3	12,9	10,0
26	Kyiv City	19	46	34	21	29	5,0	11,6	8,3	4,9	6,5
27	Sevastopol City	5	6	-	-	-	9,6	11,0	-	-	-
	Ukraine	559	603	475	568	571	8,6	9,1	7,5***	8,8***	8,8***

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Table 20

No.	Administrative territories	TB morbidity among children aged 15-17 years inclusive (new cases + relapses) *											
		Absolute number					Per 100,000 of the respective population						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	12	16	-	-	-	21,5	30,5	-	-	-	-	-
2	Vynnytska	11	13	13	4	5	19,3	23,7	25,2	25,2	8,2	8,2	10,8
3	Volynska	6	8	9	15	9	15,1	21,2	24,4	24,4	42,4	42,4	25,8
4	Dnipropetrovska	31	35	30	40	17	32,1	38,7	35,4	35,4	49,5	49,5	22,0
5	Donetska	43	36	20	10**	6**	36,1	32,2	18,8	18,8	21,1***	21,1***	12,7***
6	Zhytomyrska	10	6	6	8	7	21,5	13,6	14,4	14,4	20,7	20,7	19,0
7	Zakarpatska	11	8	11	8	9	22,5	16,9	24,1	24,1	18,3	18,3	21,0
8	Zaporizka	18	16	15	16	13	35,4	33,1	33,1	33,1	37,7	37,7	31,8
9	Ivano-Frankivska	14	12	13	8	5	26,3	23,5	26,8	26,8	17,6	17,6	11,4
10	Kyivska	17	15	10	16	5	31,2	29,0	20,8	20,8	35,4	35,4	11,7
11	Kirovohradska	10	11	10	7	6	30,3	35,9	35,5	35,5	26,8	26,8	23,8
12	Luhanska	17	20	2**	2**	2**	27,9	35,5	3,8***	3,8***	11,4***	11,4***	11,6***
13	Lvivska	28	17	20	17	20	30,6	19,4	23,9	23,9	21,6	21,6	26,5
14	Mykolajivska	16	10	13	24	10	41,7	27,6	38,4	38,4	75,4	75,4	32,9
15	Odeska	31	26	21	33	24	40,7	35,6	30,1	30,1	50,5	50,5	38,5
16	Poltavska	7	8	12	7	4	15,3	18,5	29,6	29,6	18,5	18,5	11,1
17	Rivnenska	5	4	8	5	5	10,6	8,7	17,9	17,9	11,7	11,7	12,1
18	Sumska	13	8	4	8	8	36,8	24,0	12,7	12,7	27,1	27,1	28,4
19	Terнопil'ska	14	6	12	2	4	35,1	15,6	32,8	32,8	5,8	5,8	12,2
20	Kharkivska	33	16	10	11	12	44,1	22,3	14,6	14,6	17,1	17,1	19,5
21	Khersonska	16	16	14	8	12	44,1	46,4	43,3	43,3	26,2	26,2	41,1
22	Khmelnytska	11	6	3	5	11	24,2	13,8	7,3	7,3	13,1	13,1	30,2
23	Cherkaska	9	7	12	7	12	21,9	17,8	32,6	32,6	20,4	20,4	37,4
24	Chernivetska	7	3	5	5	3	19,9	8,8	15,3	15,3	16,0	16,0	10,0
25	Chernihivska	5	6	9	5	7	15,6	19,9	31,8	31,8	18,9	18,9	27,7
26	Kyiv City	15	13	13	13	12	19,8	17,8	18,5	18,5	19,8	19,8	18,6
27	Sevastopol City	3	3	-	-	-	33,2	34,3	-	-	-	-	-
	Ukraine	413	345	295	284	228	28,7	25,2	23,8***	23,8***	24,4***	24,4***	20,4***

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

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**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 21

No.	Administrative territories	TB morbidity among children aged 0-17 years inclusive (new cases + relapses) *												
		Absolute number					Per 100,000 of the respective population							
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016			
1	AR Crimea	47	52	-	-	-	13,8	15,1	-	-	-	-	-	-
2	Vynnytska	28	27	20	16	18	9,4	9,1	6,8	5,5	6,2	6,2	6,2	6,2
3	Volyńska	15	24	20	26	24	6,4	10,2	8,5	10,9	10,1	10,1	10,1	10,1
4	Dnipropetrovska	104	108	98	136	100	18,7	19,4	17,5	24,0	17,5	24,0	17,5	17,5
5	Donetska	94	98	63	33**	34**	14,2	14,8	9,5	10,6***	10,9***	10,6***	10,9***	10,9***
6	Zhytomyrska	28	27	35	48	29	11,4	11,0	14,4	19,8	12,0	19,8	12,0	12,0
7	Zakarpatska	22	19	22	22	26	7,7	6,6	7,6	7,6	8,9	7,6	8,9	8,9
8	Zaporizka	37	36	35	48	73	12,8	12,4	12,1	16,4	24,9	16,4	24,9	24,9
9	Ivano-Frankivska	28	23	29	26	18	9,9	8,2	10,3	9,3	6,4	9,3	6,4	6,4
10	Kyivska	43	54	34	48	33	14,1	17,5	10,9	15,2	10,2	15,2	10,2	10,2
11	Kirovohradska	20	23	24	17	20	11,5	13,4	14,0	10,0	11,7	10,0	11,7	11,7
12	Luhanska	61	51	7**	16**	16**	18,2	15,3	2,1***	14,4***	14,6***	14,4***	14,6***	14,6***
13	Lvivska	48	34	44	44	62	9,9	7,0	9,1	9,1	12,8	9,1	12,8	12,8
14	Mykolajivska	30	19	27	41	20	14,4	9,1	13,0	19,7	9,6	19,7	9,6	9,6
15	Odeska	63	53	55	68	68	14,4	12,0	12,3	15,1	14,9	15,1	14,9	14,9
16	Poltavska	11	14	18	15	14	4,6	5,9	7,7	6,4	6,0	6,4	6,0	6,0
17	Rivnenska	20	23	15	23	21	7,4	8,4	5,5	8,3	7,6	8,3	7,6	7,6
18	Sumska	18	14	10	21	24	10,0	7,8	5,7	12,0	13,8	12,0	13,8	13,8
19	Ternopil'ska	23	14	13	9	8	11,0	6,8	6,4	4,4	4,0	4,4	4,0	4,0
20	Kharkivska	63	49	57	48	35	15,2	11,8	13,6	11,3	8,2	11,3	8,2	8,2
21	Khersonska	50	53	34	33	34	25,3	26,9	17,3	16,7	17,2	16,7	17,2	17,2
22	Khmelnyrska	13	15	12	19	20	5,4	6,2	5,0	8,0	8,4	8,0	8,4	8,4
23	Cherkaska	31	24	27	24	33	14,7	11,5	13,1	11,7	16,2	11,7	16,2	16,2
24	Chernivetska	16	11	9	14	7	8,7	6,0	4,9	7,6	3,8	7,6	3,8	3,8
25	Chernihivska	17	15	15	23	21	10,0	8,9	9,0	13,9	12,7	13,9	12,7	12,7
26	Kyiv City	34	59	47	34	41	7,5	12,6	9,8	6,9	8,0	9,8	6,9	8,0
27	Sevastopol City	8	9	-	-	-	13,1	14,3	-	-	-	-	-	-
	Ukraine	972	948	770	852	799	12,2	11,9	10,1****	11,2****	10,5****	11,2****	10,5****	10,5****

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

*** The calculation is based on the population of the controlled territories of Ukraine

**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 22

No.	Administrative territories	TB morbidity among urban population in Ukraine (new cases + relapses) *												
		Absolute number						Per 100,000 of the respective population						
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	
1	AR Crimea	1 167	1 073	-	-	-	88,1	95,9	-	-	-	-	-	
2	Vynnytska	488	442	432	397	484	54,8	60,5	53,6	53,6	49,3	49,3	60,2	
3	Volyńska	303	355	404	404	372	66,3	56,8	75,1	75,1	74,9	74,9	69,0	
4	Dnipropetrovska	3 168	2 793	2 554	2 693	2 204	101,3	114,5	93,0	93,0	98,5	98,5	81,1	
5	Donetska	3 621	3 409	2 742	1 189**	1 223**	86,3	91,2	69,9	69,9	71,7***	71,7***	73,7***	
6	Zhytomyrska	496	475	529	539	482	64,3	67,2	71,7	71,7	73,3	73,3	65,9	
7	Zakarpatska	291	279	327	306	348	60,5	63,2	70,8	70,8	66,2	66,2	75,4	
8	Zaporizka	1 212	1 074	1 033	1 026	966	78,3	88,1	75,7	75,7	75,5	75,5	71,6	
9	Ivano-Frankivska	399	396	394	399	331	66,7	67,5	66,3	66,3	66,9	66,9	55,3	
10	Kyivska	684	688	653	725	823	65,3	65,3	61,7	61,7	68,1	68,1	77,1	
11	Kirovohradska	521	490	529	489	387	79,8	84,5	86,5	86,5	80,3	80,3	63,9	
12	Luhanska	1 950	1 782	214**	284**	348**	91,2	99,2	110,0***	110,0***	55,2***	55,2***	68,3***	
13	Lvivska	1 047	1 076	1 123	1 150	1 117	70,6	68,8	73,7	73,7	75,5	75,5	73,4	
14	Mykolajivska	663	607	567	617	621	76,5	83,4	71,7	71,7	78,1	78,1	78,8	
15	Odeska	1 506	1 512	1 706	1 945	2 032	95,5	95,5	107,6	107,6	122,7	122,7	128,7	
16	Poltavska	570	589	569	575	569	66,2	63,8	64,1	64,1	65,0	65,0	64,7	
17	Rivnenska	337	326	343	318	277	59,5	61,6	62,6	62,6	57,9	57,9	50,6	
18	Sumska	503	463	474	494	498	60,0	64,9	61,8	61,8	64,7	64,7	65,6	
19	Terнопільська	287	240	239	222	227	51,0	61,0	50,8	50,8	47,1	47,1	48,2	
20	Kharkivska	1 283	1 074	1 018	1 109	1 075	49,1	58,9	46,6	46,6	50,8	50,8	49,5	
21	Khersonska	707	668	652	685	671	101,8	107,3	99,9	99,9	105,3	105,3	103,7	
22	Khmelnytska	396	389	425	423	414	53,8	54,8	58,7	58,7	58,4	58,4	57,2	
23	Cherkaska	476	455	421	501	418	64,1	66,8	59,6	59,6	71,1	71,1	59,7	
24	Chernivetska	230	204	186	217	147	53,6	60,8	48,5	48,5	56,3	56,3	38,0	
25	Chernihivska	428	491	468	486	456	72,8	63,2	69,7	69,7	72,7	72,7	68,6	
26	Kyiv City	1 323	1 591	1 392	1 534	1 506	56,7	47,7	49,2	49,2	53,9	53,9	52,6	
27	Sevastopol City	239	238	-	-	-	66,5	67,2	-	-	-	-	-	
Ukraine		24 295	23 179	19 394	18 727	17 996	74,5	78,1	65,7***	65,7***	63,6***	63,6***	61,3***	

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

*** The calculation is based on the population of the controlled territories of Ukraine

**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 23

No.	Administrative territories	TB morbidity among rural population in Ukraine (new cases + relapses) *									
		Absolute number					Per 100,000 of the respective population				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
1	AR Crimea	611	627	-	-	-	82,9	84,9	-	-	-
2	Vynnytska	632	614	554	575	493	77,0	75,5	68,8	72,1	62,4
3	Volynska	290	415	455	474	446	57,7	82,7	90,8	94,7	89,1
4	Dnipropetrovska	564	552	513	567	410	102,4	100,9	94,4	105,1	76,6
5	Donetska	309	285	229	165**	190**	73,8	68,8	56,0	53,9***	62,1***
6	Zhytomyrska	512	491	495	533	489	95,6	92,5	94,2	102,3	94,6
7	Zakarpatska	484	488	498	537	527	61,4	61,7	62,9	67,6	66,3
8	Zaporizka	358	353	396	371	384	86,1	85,5	96,6	91,2	95,3
9	Ivano-Frankivska	668	676	640	687	583	85,0	86,0	81,5	87,7	74,6
10	Kyivska	682	633	619	700	656	102,4	95,5	93,7	106,2	99,5
11	Kirovohradska	422	383	437	410	381	111,3	102,3	118,3	112,3	105,5
12	Luhanska	289	250	84**	103**	118**	95,6	83,7	28,4***	50,3***	58,3***
13	Lvivska	875	852	882	876	895	87,4	85,3	88,5	88,0	90,0
14	Mykolajivska	478	382	388	385	329	125,0	100,6	103,0	103,0	89,0
15	Odeska	913	898	995	1 007	1 076	114,1	112,2	124,4	125,8	134,5
16	Poltavska	486	442	496	476	427	84,3	77,5	88,1	85,4	77,5
17	Rivnenska	508	504	454	486	495	83,8	82,9	74,5	79,5	80,7
18	Sumska	312	286	313	329	302	83,1	77,3	86,2	92,1	85,8
19	Ternopil'ska	381	394	378	312	381	62,8	65,3	63,0	52,4	64,4
20	Kharkivska	393	351	301	342	344	71,6	64,6	55,9	64,0	64,9
21	Khersonska	532	490	438	447	380	125,8	116,5	104,7	107,4	91,8
22	Khmelnytska	423	454	485	530	467	71,2	77,3	83,6	92,4	82,4
23	Cherkaska	458	435	449	413	408	81,7	78,3	81,7	76,0	75,7
24	Chernivetska	296	271	302	278	214	56,5	51,8	57,8	53,3	41,2
25	Chernihivska	396	446	380	421	409	98,3	113,0	98,3	111,2	110,1
26	Kyiv City	-	-	-	-	-	-	-	-	-	-
27	Sevastopol City	27	12	-	-	-	114,2	50,4	-	-	-
Ukraine		12 299	11 984	11 181	11 424	10 804	85,8	84,1	83,4***	85,7***	81,6****

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

*** The calculation is based on the population of the controlled territories of Ukraine

**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 24

No.	Administrative territories	TB incidence among TB contacts in nidi with bacterioexcretion *														
		Absolute number					Per 1000 of contact persons									
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2013	2014	2015	2016	
1	AR Crimea	9	7	-	-	-	2,9	2,5	-	-	-	-	-	-	-	
2	Vinnitska	18	22	21	23	15	8,5	10,9	9,8	10,2	8,7	10,2	10,2	8,7		
3	Volynska	9	9	4	3	6	8,6	8,7	4,5	3,4	5,5	4,5	3,4	5,5		
4	Dnipropetrovska	9	6	6	19	12	1,9	1,1	1,6	3,4	3,0	1,6	3,4	3,0		
5	Donetska	26	35	29	23**	38**	4,9	7,1	7,2	12,2	22,7	7,2	12,2	22,7		
6	Zhytomyrska	1	1	14	6	15	0,8	0,8	11,0	4,7	11,2	11,0	4,7	11,2		
7	Zakarpatska	3	4	11	12	15	1,2	1,6	6,0	6,5	7,8	6,0	6,5	7,8		
8	Zapornizka	6	5	18	16	43	2,8	2,2	8,4	7,5	19,4	8,4	7,5	19,4		
9	Ivano-Frankivska	5	6	5	6	5	3,3	3,9	4,4	5,3	4,6	4,4	5,3	4,6		
10	Kyivska	6	9	5	14	20	3,7	6,5	3,6	10,0	10,8	3,6	10,0	10,8		
11	Kirovohradska	10	5	8	5	4	5,7	2,4	6,5	4,0	3,0	6,5	4,0	3,0		
12	Luhanska	22	22	1**	2**	7**	7,2	6,7	1,2	2,2	12,6	1,2	2,2	12,6		
13	Lvivska	17	20	32	25	60	7,1	8,2	14,1	11,0	26,0	14,1	11,0	26,0		
14	Mykolajivska	12	9	9	18	21	7,5	5,9	6,4	12,9	12,0	6,4	12,9	12,0		
15	Odeska	29	26	17	31	22	7,3	8,0	5,0	9,2	5,5	5,0	9,2	5,5		
16	Poltavska	3	2	3	8	18	2,5	2,0	3,0	8,0	16,6	3,0	8,0	16,6		
17	Rivnenska	10	17	13	19	14	7,5	14,6	10,8	15,8	7,3	10,8	15,8	7,3		
18	Sumska	5	6	5	4	7	3,2	3,9	4,3	3,4	5,5	4,3	3,4	5,5		
19	Teropiliska	8	11	7	10	10	8,2	12,2	9,9	14,2	11,8	9,9	14,2	11,8		
20	Kharkivska	24	18	22	15	21	8,7	6,7	8,8	5,6	8,0	8,8	5,6	8,0		
21	Khersonska	25	27	16	3	10	12,7	16,3	13,0	2,4	7,5	13,0	2,4	7,5		
22	Khmelnytska	2	2	4	5	3	2,1	2,3	5,4	6,8	3,7	5,4	6,8	3,7		
23	Cherkaska	4	5	3	11	0	3,4	4,6	2,8	10,4	0,0	2,8	10,4	0,0		
24	Chernivetska	0	2	5	8	3	0,0	2,3	6,7	10,7	2,8	6,7	10,7	2,8		
25	Chernihivska	3	9	5	1	4	1,7	6,4	4,1	0,8	3,2	4,1	0,8	3,2		
26	Kyiv City	10	13	8	14	11	5,1	7,4	6,4	11,2	6,9	6,4	11,2	6,9		
27	Sevastopol City	0	1	-	-	-	0,0	2,0	-	-	-	-	-	-		
	Ukraine	276	299	271	301	384	5,0	5,7	6,7	7,6	9,3	6,7	7,6	9,3		

* The data are used from the form No. 33-zdorov "Report on TB Patients"

** The data from the controlled territories of Ukraine are taken into account

Table 25

No.	Administrative territories	Social structure of new TB cases, 2016 (absolute number)														
		Total	Workers	Clerks	Healthcare workers	Agrarians	Private entrepreneurs	Students	Pupils	Unemployed people of working age	Retired	Ex-prisoners	Persons without permanent residence	Persons registered in other ministries	Others	
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	Vynnytska	769	75	15	11	22	5	19	11	390	120	8	11	82		
3	Volyńska	620	70	8	18	8	5	13	12	371	79	1	4	28		
4	Dnipropetrovska	2 105	282	42	36	18	12	28	38	1208	148	7	16	239		
5	Donetska	1 172	215	9	19	0	2	19	13	618	96	20	33	93		
6	Zhytomyrska	780	75	16	13	10	4	6	23	396	138	17	22	45		
7	Zakarpatska	765	88	11	5	2	4	0	8	499	100	6	3	34		
8	Zaporizka	1 066	94	32	25	2	2	17	26	607	110	0	30	114		
9	Ivano-Frankivska	718	49	18	15	2	1	15	10	377	183	6	2	37		
10	Kyivska	1 280	199	19	27	11	10	14	12	752	132	20	0	66		
11	Kirovohradska	648	73	6	16	18	0	6	11	423	62	15	11	5		
12	Luhanska	370	27	11	4	4	2	5	9	209	45	7	1	42		
13	Lvivska	1 557	154	39	19	1	10	25	19	764	236	15	10	255		
14	Mykolajivska	777	114	22	6	8	3	13	10	506	79	2	4	4		
15	Odeska	2 594	241	35	31	2	4	38	33	1648	156	73	25	291		
16	Poltavska	799	111	20	10	17	4	7	7	446	123	21	7	17		
17	Rivnenska	611	43	25	9	6	1	10	14	349	121	6	2	14		
18	Sumska	615	49	24	6	5	2	7	10	381	93	0	11	23		
19	Ternopil'ska	475	28	13	6	1	1	13	4	254	119	5	2	21		
20	Kharkivska	1 163	110	59	25	2	4	24	15	595	103	52	28	142		
21	Khersonska	799	29	8	9	11	0	14	19	515	89	3	45	48		
22	Khmelnytska	690	59	17	14	9	2	7	6	372	149	6	14	27		
23	Cherkaska	654	75	23	10	23	3	8	16	372	79	19	1	19		
24	Chernivetska	273	19	3	10	0	1	6	6	156	56	2	2	5		
25	Chernihivska	656	63	8	13	6	1	7	17	396	136	6	0	3		
26	Kyiv City	1 336	135	84	24	0	7	20	20	714	175	99	0	20		
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Ukraine	23 292	2477	567	381	188	90	341	369	13318	2927	445	284	1674		

Table 26

Social structure of new TB cases, 2016 (percentage of the total number of patients)															
No.	Administrative territories	Total	Workers	Clerks	Healthcare workers	Agrarians	Private entrepreneurs	Students	Pupils	Unemployed people of working age	Retired	Ex-prisoners	Persons without permanent residence	Persons registered in other ministries	Others
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	9,8	2,0	1,4	2,9	0,7	2,5	1,4	50,7	15,6	0,0	0,0	1,0	1,4	10,7
3	Volynska	11,3	1,3	2,9	1,3	0,8	2,1	1,9	58,8	12,7	0,5	0,5	0,2	0,6	4,5
4	Dnipropetrovska	13,0	2,0	1,7	0,9	0,6	1,3	1,8	57,0	7,0	0,3	0,3	1,5	0,8	11,0
5	Donetska	18,3	0,8	1,6	0,0	0,2	1,6	1,1	52,7	8,2	3,0	3,0	1,7	2,8	7,9
6	Zhytomyrska	9,6	2,1	1,7	1,3	0,5	0,8	2,9	50,8	17,7	1,9	1,9	2,2	2,8	5,4
7	Zakarpatska	11,5	1,4	0,7	0,3	0,5	0,0	1,0	65,2	13,1	0,7	0,7	0,8	0,4	4,4
8	Zaporizka	8,8	3,0	2,3	0,2	0,2	1,6	2,4	57,0	10,3	0,7	0,7	0,0	2,8	10,7
9	Ivano-Frankivska	6,8	2,5	2,1	0,3	0,1	2,1	1,4	52,5	25,5	0,4	0,4	0,8	0,3	5,2
10	Kyivska	15,5	1,5	2,1	0,9	0,8	1,1	0,9	58,8	10,3	1,4	1,4	1,6	0,0	5,0
11	Kirovohradska	11,3	0,9	2,5	2,8	0,0	0,9	1,7	65,3	9,6	0,3	0,3	2,3	1,7	0,8
12	Luhanska	7,3	3,0	1,1	1,1	0,5	1,4	3,0	56,0	12,2	1,1	1,1	1,9	0,3	11,3
13	Lvovska	9,9	2,5	1,2	0,1	0,6	1,6	1,2	49,1	15,2	0,6	0,6	1,0	0,6	16,3
14	Mykolajivska	14,7	2,8	0,8	1,0	0,4	1,7	1,3	65,1	10,3	0,8	0,8	0,3	0,5	0,5
15	Odeska	9,3	1,3	1,2	0,1	0,2	1,5	1,3	63,5	6,0	0,7	0,7	2,8	1,0	11,2
16	Poltavska	13,9	2,5	1,3	2,1	0,5	0,9	0,9	55,8	15,4	1,1	1,1	2,6	0,9	2,1
17	Rivnenska	7,0	4,1	1,4	1,0	0,1	1,6	2,3	57,1	20,0	1,8	1,8	1,0	0,3	2,3
18	Sumska	8,0	3,9	1,0	0,8	0,3	1,1	1,6	62,0	15,1	0,7	0,7	0,0	1,8	3,7
19	Ternopil'ska	5,8	2,7	1,2	0,2	0,2	2,7	0,8	53,4	25,0	1,6	1,6	1,0	0,4	4,4
20	Kharkivska	9,5	5,1	2,1	0,2	0,3	2,1	1,3	51,2	8,9	0,3	0,3	4,5	2,4	12,2
21	Khersonska	3,6	1,0	1,1	1,4	0,0	1,7	2,4	64,4	11,1	1,1	1,1	0,4	5,6	6,0
22	Khmelnytska	8,6	2,5	2,0	1,3	0,3	1,0	0,9	53,9	21,6	1,2	1,2	0,9	2,0	3,9
23	Cherkaska	11,5	3,5	1,5	3,5	0,5	1,2	2,5	56,9	12,1	0,9	0,9	2,9	0,2	2,9
24	Chernivetska	7,0	1,1	3,7	0,0	0,4	2,2	2,2	57,1	20,5	0,7	0,7	2,6	0,7	1,8
25	Chernihivska	9,6	1,2	2,0	0,9	0,2	1,1	2,6	60,4	20,7	0,0	0,0	0,9	0,0	0,5
26	Kyiv City	10,1	6,3	1,8	0,0	0,5	1,5	1,5	53,4	13,1	2,8	2,8	7,4	0,0	1,5
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ukraine	10,6	2,4	1,6	0,8	0,4	1,5	1,6	57,2	12,6	1,0	1,0	1,9	1,2	7,2

Table 27

Social structure of new TB cases by risk factors *														
No.	Administrative territories	Total recorded cases				Alcohol abusers				Injectable drugs users				
		2015		2016		Absolute number		%		Absolute number		%		
		2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vinnyska	758	769	132	187	17,4	24,3	23	23	3,0	3,0	3	3	3
3	Volyńska	653	620	150	202	23,0	32,5	4	10	0,6	0,6	1,6	1,6	1,6
4	Dnipropetrovska	2566	2 105	224	167	8,7	7,9	115	102	4,5	4,5	4,8	4,8	4,8
5	Donetska	1086	1 172	121	149	11,1	12,7	65	55	6,0	6,0	4,7	4,7	4,7
6	Zhytomyrska	830	780	160	140	19,3	17,9	12	10	1,4	1,4	1,3	1,3	1,3
7	Zakarpatska	749	765	159	135	21,2	17,6	0	0	0,0	0,0	0	0	0
8	Zaporizka	1085	1 066	134	129	12,3	12,1	23	24	2,1	2,1	2,2	2,2	2,2
9	Ivano-Frankivska	845	718	123	103	14,6	14,3	2	7	0,2	0,2	1	1	1
10	Kyivska	1194	1 280	177	194	14,8	15	69	84	5,8	5,8	6,6	6,6	6,6
11	Kirovohradska	747	648	70	57	9,4	8,8	27	22	3,6	3,6	3,4	3,4	3,4
12	Luhanska	316	370	40	51	10,1	13,8	15	6	4,4	4,4	1,7	1,7	1,7
13	Lvivska	1509	1 557	215	206	14,2	13,2	39	42	2,6	2,6	2,8	2,8	2,8
14	Mykolajivska	803	777	133	156	16,6	20,1	28	36	3,5	3,5	4,6	4,6	4,6
15	Odeska	2446	2 594	127	141	5,2	5,4	72	50	2,9	2,9	1,9	1,9	1,9
16	Poltavska	789	799	99	127	12,5	15,9	17	17	2,1	2,1	2,1	2,1	2,1
17	Rivnenska	636	611	100	131	15,7	21,4	6	7	0,9	0,9	1,1	1,1	1,1
18	Sumska	623	615	105	101	16,9	16,4	16	7	2,6	2,6	1,1	1,1	1,1
19	Terнопil'ska	409	475	52	60	12,7	12,6	4	6	1,0	1,0	1,3	1,3	1,3
20	Kharkivska	1182	1 163	90	71	7,6	6,6	21	16	1,7	1,7	1,5	1,5	1,5
21	Khersonska	875	799	180	89	20,6	12	47	20	5,4	5,4	2,7	2,7	2,7
22	Khmelnyvska	724	690	89	106	12,3	15,4	6	7	0,8	0,8	1	1	1
23	Cherkaska	716	654	93	80	13,0	12,2	21	16	2,9	2,9	2,5	2,5	2,5
24	Chernivetska	364	273	47	51	12,9	18,7	10	3	2,7	2,7	1,1	1,1	1,1
25	Chernihivska	677	656	107	148	15,8	22,6	23	35	3,4	3,4	2,3	2,3	2,3
26	Kyiv City	1314	1 336	51	60	3,9	4,5	63	45	4,8	4,8	3,4	3,4	3,4
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ukraine	23896	23 292	2978	3041	12,5	13,1	728	650	3,0	3,0	2,8	2,8	2,8

* According to additional information as per primary registering form No. 081-2/0 "Factors influencing the Course of Disease and Treatment Outcome TB 01-1"

Table 28

TB morbidity among health care workers in health care facilities in Ukraine (including TB dispensaries)*													
No.	Administrative territories	Absolute number						Per 100,000 of health care workers					
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	39	36	-	-	-	114,9	109,0	-	-	-	-	
2	Vynnytska	21	13	14	17	16	67,6	44,8	49,3	49,3	59,3	58,3	
3	Volynska	13	13	10	13	19	72,8	72,7	56,0	56,0	72,8	108,8	
4	Dnipropetrovska	54	61	44	61	41	90,8	105,3	76,4	76,4	106,7	73,0	
5	Donetska	54	47	37	18**	24**	68,6	56,7	115,7	115,7	55,9	81,0	
6	Zhytomyrska	8	10	11	12	15	35,0	44,3	49,1	49,1	53,4	68,6	
7	Zakarpatska	4	4	10	5	5	20,0	20,5	51,5	51,5	25,6	26,4	
8	Zaporizka	31	21	20	25	29	95,9	65,7	62,8	62,8	77,7	91,9	
9	Ivano-Frankivska	17	12	20	17	16	62,9	44,3	74,0	74,0	63	60,7	
10	Kyivska	18	15	14	21	27	60,6	50,0	46,8	46,8	71	93,5	
11	Kirovohradska	9	10	16	13	17	47,4	52,9	85,4	85,4	68,5	92,5	
12	Luhanska	31	37	3**	1**	3**	75,9	92,0	29,4	29,4	9,4	28,3	
13	Lvivska	32	28	23	21	22	65,3	57,3	47,2	47,2	43,6	46,0	
14	Mykolajivska	15	10	8	15	7	79,7	54,5	43,2	43,2	82,7	39,8	
15	Odeska	33	24	25	19	34	83,5	61,2	64,2	64,2	50,3	91,8	
16	Poltavska	22	13	11	8	13	82,4	49,4	42,2	42,2	30,3	50,6	
17	Rivnenska	10	12	10	11	9	45,5	54,7	46,1	46,1	50,3	42,2	
18	Sumska	7	8	6	6	7	32,5	37,6	28,3	28,3	27,8	33,1	
19	Teropiliska	11	9	12	8	6	54,8	44,5	59,6	59,6	39,8	30,7	
20	Kharkivska	37	20	18	29	27	79,6	43,3	39,3	39,3	63,4	60,6	
21	Khersonska	30	18	8	16	13	161,8	101,1	45,1	45,1	90,8	76,4	
22	Khmelnytska	9	9	13	9	15	39,5	39,9	57,9	57,9	39,9	68,4	
23	Cherkaska	11	18	11	10	10	46,9	77,3	47,5	47,5	43,3	44,5	
24	Chernivetska	3	10	5	8	11	18,4	61,6	31,2	31,2	50,3	70,8	
25	Chernihivska	19	11	11	16	16	86,2	50,5	51,0	51,0	75	77,2	
26	Kyiv City	21	23	27	20	24	39,4	43,4	50,7	50,7	38,3	46,3	
27	Sevastopol City	3	5	-	-	-	45,6	75,7	-	-	-	-	
	Ukraine	562	497	387	399	426	68,6	61,0	56,0	56,0	57,9	63,4	

* The data are used from the form No. 33-karotka "Report on TB Patients in Quarter _____ of 20__"

** The data from the controlled territories of Ukraine are taken into account

Table 29

No.	Administrative territories	TB morbidity among health care workers in TB facilities *													
		Absolute number					Per 100,000 of health care workers								
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016				
1	AR Crimea	8	5	-	-	-	197,6	120,9	-	-	-	-	-	-	-
2	Vynnytska	5	1	2	5	3	100,3	0,0	184,5	461,3	363,6	363,6	363,6	363,6	363,6
3	Volyńska	3	1	3	0	3	88,9	48,3	363,2	0,0	382,7	382,7	382,7	382,7	382,7
4	Dnipropetrovska	7	8	5	10	5	50,3	108,8	257,2	514,4	266,2	266,2	266,2	266,2	266,2
5	Doneńska	10	10	4	3**	4**	65,0	119,2	503,8	377,8	520,2	520,2	520,2	520,2	520,2
6	Zhytomyrska	1	1	1	4	4	46,0	48,3	111,1	444,4	463,0	463,0	463,0	463,0	463,0
7	Zakarpatska	0	0	3	1	0	0,0	0,0	283,0	94,3	0,0	0,0	0,0	0,0	0,0
8	Zaporizka	9	7	3	5	2	79,8	128,7	282,2	470,4	469,5	469,5	469,5	469,5	469,5
9	Ivano-Frankivska	3	1	7	3	0	60,1	20,2	365,9	156,8	0,0	0,0	0,0	0,0	0,0
10	Kyivska	3	3	2	1	1	80,7	94,6	299,4	149,7	139,1	139,1	139,1	139,1	139,1
11	Kirovohradska	0	2	1	1	0	0,0	138,6	113,4	113,4	0,0	0,0	0,0	0,0	0,0
12	Luhanska	6	3	2**	0**	1**	58,0	63,3	259,4	0,0	520,8	520,8	520,8	520,8	520,8
13	Lvivska	7	6	2	4	2	41,8	73,4	97,8	195,7	101,8	101,8	101,8	101,8	101,8
14	Mykolajivska	2	1	4	5	2	34,1	0,0	530,5	663,1	250,0	250,0	250,0	250,0	250,0
15	Odeska	5	2	1	0	2	122,3	50,3	93,6	0,0	194,7	194,7	194,7	194,7	194,7
16	Poltavska	4	5	0	1	5	140,0	188,1	0,0	131,8	558,7	558,7	558,7	558,7	558,7
17	Rivnenska	1	1	4	3	1	41,3	43,3	465,1	348,8	122,9	122,9	122,9	122,9	122,9
18	Sumska	3	0	1	2	2	146,2	0,0	208,3	416,7	412,4	412,4	412,4	412,4	412,4
19	Ternopilska	2	1	0	1	1	69,6	35,8	0,0	104,3	117,2	117,2	117,2	117,2	117,2
20	Kharkivska	7	4	4	3	2	126,0	68,7	249,4	187,0	124,3	124,3	124,3	124,3	124,3
21	Khersonska	8	5	1	0	0	316,4	262,8	127,1	0,0	0,0	0,0	0,0	0,0	0,0
22	Khmelnytska	0	3	5	2	2	0,0	102,3	602,4	241,0	241,0	241,0	241,0	241,0	241,0
23	Cherkaska	3	3	4	1	3	110,0	120,7	593,5	148,4	448,4	448,4	448,4	448,4	448,4
24	Chernivetska	0	4	0	2	2	0,0	186,3	0,0	289,9	321,5	321,5	321,5	321,5	321,5
25	Chernihivska	5	2	1	3	7	135,9	30,0	173,6	520,8	774,3	774,3	774,3	774,3	774,3
26	Kyiv City	2	3	0	2	5	89,1	150,2	0,0	207,0	517,6	517,6	517,6	517,6	517,6
27	Sevastopol City	1	1	-	-	-	62,6	66,8	-	-	-	-	-	-	-
	Ukraine	105	83	60	62	59	83,7	84,8	240,4	248,4	251,1	251,1	251,1	251,1	251,1

* The data are used from the form No. 33-korotka "Report on TB Patients in Quarter _____ of 20__"

** The data from the controlled territories of Ukraine are taken into account

Table 30

No.	Administrative territories	Total number of TB cases	Total number of pulmonary TB cases	Registering TB cases based on the results of smear/culture tests for MTB														
				Pulmonary TB (ICD-10 code A15.0 - 3, A16.0 - 2, A19 - part.)					Extrapulmonary TB (ICD-10 code - 10A15.0 - 3, A16.0 - 2, A19 - part.)									
				Positive smear/culture		Negative smear		New cases		Relapses		Others		New cases		Relapses		Others
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	1036	941	456	155	58	229	40	3	79	13	79	13	3	79	13	3	3
3	Volynska	834	729	416	171	42	83	16	1	94	10	94	10	1	94	10	1	1
4	Dnipropetrovska	3926	3544	1090	311	1005	655	126	357	248	61	248	61	73	248	61	73	73
5	Donetska	1587	1533	665	171	188	402	55	52	47	4	47	4	3	47	4	3	3
6	Zhytomyrska	1113	1006	500	149	142	165	31	19	93	10	93	10	4	93	10	4	4
7	Zakarpatska	1107	1076	537	99	184	199	10	47	26	0	26	0	5	26	0	5	5
8	Zaporizka	1455	1320	637	183	145	266	63	26	107	20	107	20	8	107	20	8	8
9	Ivano-Frankivska	1084	999	408	137	121	230	51	52	77	8	77	8	0	77	8	0	0
10	Kyivska	1585	1325	648	120	116	370	47	24	226	21	226	21	13	226	21	13	13
11	Kirovohradska	938	887	463	94	157	137	18	18	41	8	41	8	2	41	8	2	2
12	Luhanska	532	515	216	66	77	120	29	7	15	1	15	1	1	15	1	1	1
13	Lvivska	2069	1914	810	296	119	534	127	28	141	13	141	13	1	141	13	1	1
14	Mykolajivska	1267	1181	474	129	270	222	36	50	63	8	63	8	15	63	8	15	15
15	Odeska	3363	3088	1498	370	212	805	116	87	248	23	248	23	4	248	23	4	4
16	Poltavska	1098	1047	471	143	92	282	43	16	38	11	38	11	2	38	11	2	2
17	Rivnenska	807	724	391	121	38	140	31	3	75	8	75	8	0	75	8	0	0
18	Sumska	841	764	428	143	53	106	28	6	65	12	65	12	0	65	12	0	0
19	Ternopiliska	624	565	253	95	22	160	32	3	53	6	53	6	0	53	6	0	0
20	Kharkivska	1476	1385	733	193	152	266	30	11	77	12	77	12	2	77	12	2	2
21	Khersonska	1066	996	532	171	94	149	38	12	58	11	58	11	1	58	11	1	1
22	Khmelnytska	975	875	331	93	62	256	79	54	92	4	92	4	4	92	4	4	4
23	Cherkaska	922	766	378	122	81	153	29	3	119	27	119	27	10	119	27	10	10
24	Chernivetska	419	392	206	79	46	48	9	4	23	4	23	4	0	23	4	0	0
25	Chernihivska	949	876	441	127	72	149	66	21	55	16	55	16	2	55	16	2	2
26	Kyiv City	1760	1572	756	117	212	414	42	31	168	11	168	11	9	168	11	9	9
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	State Penitentiary Service of Ukraine	1097	1055	256	213	72	289	126	99	26	9	26	9	7	26	9	7	7
29	Ministry of Defense of Ukraine	158	148	55	8	0	75	10	0	9	1	9	1	0	9	1	0	0
Ukraine		34088	31223	14049	4076	3832	6904	1328	1034	2363	332	2363	332	170	2363	332	170	170

** The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB 07 (quarterly)"

Table 31

Administrative territories		Registering TB patients																	
		2015							2016										
		No.	Total number of TB cases	Including Pulmonary TB			Including Extrapulmonary TB			Total number of TB cases	Including Pulmonary TB			Including Extrapulmonary TB					
New cases	Relapses			Others	New cases	Relapses	Others	New cases	Relapses		Others	New cases	Relapses	Others					
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	1045	689	202	75	66	12	1	1036	685	195	61	79	13	3	-	-	-	-
3	Volynska	967	522	203	82	131	22	7	834	499	187	43	94	10	1	-	-	-	-
4	Dnipropetrovska	4224	2258	579	908	358	83	38	3926	1745	437	1 362	248	61	73	-	-	-	-
5	Donetska	1626	1016	259	283	54	9	5	1587	1067	226	240	47	4	3	-	-	-	-
6	Zhytomyrska	1182	699	233	131	108	9	2	1113	665	180	161	93	10	4	-	-	-	-
7	Zakarpatska	1118	716	92	276	31	2	1	1107	736	109	231	26	0	5	-	-	-	-
8	Zaporizka	1466	893	237	218	93	17	8	1455	903	246	171	107	20	8	-	-	-	-
9	Ivano-Frankivska	1278	755	221	202	79	9	1	1084	638	188	173	77	8	0	-	-	-	-
10	Kyivska	1652	1019	222	201	173	27	11	1585	1018	167	140	226	21	13	-	-	-	-
11	Kirovohradska	1053	717	146	159	24	4	3	938	600	112	175	41	8	2	-	-	-	-
12	Luhanska	440	267	68	79	22	3	1	532	336	95	84	15	1	1	-	-	-	-
13	Lvivska	2180	1319	470	257	111	18	5	2069	1344	423	147	141	13	1	-	-	-	-
14	Mykolajivska	1372	737	187	364	61	10	13	1267	696	165	320	63	8	15	-	-	-	-
15	Odeska	3206	2123	460	325	248	39	11	3363	2303	486	299	248	23	4	-	-	-	-
16	Poltavska	1162	744	256	114	40	8	0	1098	753	186	108	38	11	2	-	-	-	-
17	Rivnenska	847	547	160	44	87	7	2	807	531	152	41	75	8	0	-	-	-	-
18	Sumska	986	526	184	167	76	11	22	841	534	171	59	65	12	0	-	-	-	-
19	Terнопilska	540	357	120	16	43	4	0	624	413	127	25	53	6	0	-	-	-	-
20	Kharkivska	1434	976	219	161	69	9	0	1476	999	223	163	77	12	2	-	-	-	-
21	Khersonska	1185	733	219	144	75	12	2	1066	681	209	106	58	11	1	-	-	-	-
22	Khmelnyvska	1056	617	208	126	88	12	5	975	587	172	116	92	4	4	-	-	-	-
23	Cherkaska	1022	593	174	104	120	25	6	922	531	151	84	119	27	10	-	-	-	-
24	Chernivetska	559	325	127	57	37	12	1	419	254	88	50	23	4	0	-	-	-	-
25	Chernihivska	947	606	219	59	51	11	1	949	590	193	93	55	16	2	-	-	-	-
26	Kyiv City	1793	1163	205	234	159	19	13	1760	1170	159	243	168	11	9	-	-	-	-
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	State Penitentiary Service of Ukraine	1385	614	502	203	40	21	5	1097	545	339	171	26	9	7	-	-	-	-
29	Ministry of Defense of Ukraine	177	147	20	0	9	1	0	158	130	18	0	9	1	0	-	-	-	-
Ukraine		35902	21678	6202	4989	2453	416	164	34088	20953	5404	4866	2363	332	170	-	-	-	-

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB 07 (quarterly)"

Table 32

No.	Administrative territories	Registering HIV-positive patients with TB											
		2015					2016						
		Total number of TB/HIV cases	Including			Total number of TB/HIV cases	Including			New cases	Relapses	Others	
Pulmonary TB			Extrapulmonary TB	Pulmonary TB			Extrapulmonary TB						
		New cases	Relapses	Others	New cases	Relapses	Others	New cases	Relapses	Others	New cases	Relapses	Others
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	99	60	22	5	9	3	0	105	76	16	3	2
3	Volynska	80	37	24	8	8	2	1	82	46	19	5	0
4	Dnipropetrovska	1448	751	211	299	131	37	19	1327	556	143	462	43
5	Donezka	543	332	85	94	21	7	4	533	349	88	76	1
6	Zhytomyrska	163	96	30	22	10	4	1	169	96	26	24	0
7	Zakarpatska	33	21	0	5	6	0	1	37	23	3	10	0
8	Zaporizka	230	106	44	33	34	10	3	227	120	37	18	3
9	Ivano-Frankivska	63	42	8	9	3	1	0	47	29	4	6	0
10	Kyivska	478	245	62	54	90	18	9	487	246	43	43	7
11	Kirovohradska	189	129	23	31	4	1	1	171	114	20	21	0
12	Luhanska	71	42	11	12	4	1	1	88	58	22	8	0
13	Lvivska	230	119	34	35	27	10	5	226	124	41	19	1
14	Mykolajivska	385	178	60	108	26	7	6	407	187	63	113	12
15	Odeska	1147	718	151	92	156	23	7	1216	803	161	83	0
16	Poltavska	157	84	28	25	15	5	0	146	89	23	15	1
17	Rivnenska	53	40	8	1	2	1	1	64	45	11	3	0
18	Sumska	98	51	13	15	17	1	1	85	50	16	3	0
19	Ternopiljska	30	20	9	1	0	0	0	43	26	11	1	0
20	Kharkivska	133	87	20	16	9	1	0	111	68	14	15	0
21	Khersonska	219	122	47	17	26	6	1	209	131	45	12	0
22	Khmelnyvska	127	57	28	13	20	6	3	109	51	21	14	1
23	Cherkaska	223	112	34	20	42	12	3	231	109	45	14	5
24	Chernivetska	53	34	8	3	5	3	0	25	12	7	2	0
25	Chernihivska	169	90	49	12	10	8	0	182	109	33	16	2
26	Kyiv City	519	306	63	59	79	8	4	518	314	57	59	4
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-
28	State Penitentiary Service of Ukraine	288	118	106	20	22	20	2	258	133	83	11	5
29	Ministry of Defense of Ukraine	15	13	1	0	1	0	0	10	8	0	0	0
Ukraine		7243	4010	1179	1009	777	195	73	7113	3972	1052	1056	161

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB 07 (quarterly)"

Table 33

No.	Administrative territories	TB morbidity in combination with AIDS (new cases + relapses) *												
		Absolute number					Per 100,000 population							
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016			
1	AR Crimea	357	342	-	-	-	18,3	17,5	-	-	-	-	-	-
2	Vynnytska	55	63	82	93	98	3,4	3,9	5,1	5,1	5,1	5,8	6,1	
3	Volynska	44	50	51	67	76	4,2	4,8	4,9	4,9	4,9	6,4	7,3	
4	Dnipropetrovska	942	852	850	952	794	28,4	25,8	25,8	25,8	29,1	29,1	24,4	
5	Donetska	1 134	1 070	905	442**	471**	25,8	24,5	20,9	20,9	22,5***	22,5***	24,0***	
6	Zhytomyrska	84	98	101	141	146	6,6	7,7	8,0	8,0	11,2	11,2	11,7	
7	Zakarpatska	13	18	26	25	28	1,0	1,4	2,1	2,1	2,0	2,0	2,2	
8	Zaporizka	166	170	177	196	207	9,3	9,5	10,0	10,0	11,1	11,1	11,8	
9	Ivano-Frankivska	36	39	51	56	42	2,6	2,8	3,7	3,7	4,1	4,1	3,0	
10	Kyivska	195	199	246	365	422	11,4	11,6	14,3	14,3	21,2	21,2	24,4	
11	Kirovohradska	108	109	186	153	151	10,8	11,0	19,0	19,0	15,7	15,7	15,6	
12	Luhanska	192	187	44**	57**	66**	8,5	8,3	2,0***	2,0***	7,9***	7,9***	9,3***	
13	Lvivska	120	125	166	181	218	4,8	5,0	6,6	6,6	7,2	7,2	8,7	
14	Mykolajivska	262	250	269	268	279	22,3	21,3	23,0	23,0	23,0	23,0	24,1	
15	Odeska	591	657	839	1 045	1 139	24,9	27,6	35,2	35,2	43,8	43,8	47,9	
16	Poltavska	135	111	87	128	126	9,2	7,6	6,0	6,0	8,9	8,9	8,8	
17	Rivnenska	46	44	52	51	60	4,0	3,8	4,5	4,5	4,4	4,4	5,2	
18	Sumska	37	36	73	76	78	3,2	3,2	6,5	6,5	6,8	6,8	7,0	
19	Ternopil'ska	16	18	12	28	42	1,5	1,7	1,1	1,1	2,6	2,6	4,0	
20	Kharkivska	125	117	99	126	92	4,6	4,3	3,6	3,6	4,6	4,6	3,4	
21	Khersonska	162	142	183	201	208	15,0	13,2	17,1	17,1	18,8	18,8	19,6	
22	Khmelnytska	80	61	92	111	98	6,1	4,7	7,1	7,1	8,6	8,6	7,6	
23	Cherkaska	168	155	169	191	202	13,2	12,3	13,5	13,5	15,3	15,3	16,3	
24	Chernivetska	20	14	17	47	21	2,2	1,5	1,9	1,9	5,2	5,2	2,3	
25	Chernihivska	121	124	133	147	158	11,2	11,6	12,6	12,6	14,0	14,0	15,2	
26	Kyiv City	260	369	304	425	400	9,4	13,2	10,8	10,8	14,9	14,9	14,0	
27	Sevastopol City	62	58	-	-	-	16,3	15,2	-	-	-	-	-	
Ukraine		5 531	5 478	5 210	5 572	5 622	12,2	12,1	12,1***	12,1***	13,0***	13,0***	13,2****	

* The data are used from the form No. 8 "Report on Active Tuberculosis Incidence"

** The data from the controlled territories of Ukraine are taken into account

*** The calculation is based on the population of the controlled territories of Ukraine

**** The calculation is based on the population of Ukraine, including the temporarily occupied Luhanska and Donetsk oblasts

Table 34

Administrative territories		Laboratory diagnostics of pulmonary TB new cases *																			
		2015							2016												
		with bacterioexcretion confirmed by smear (St)**		with bacterioexcretion confirmed by culture (Ct)**		total drug susceptibility tests performed**		of them, number of MDR-TB cases**		Total†		with bacterioexcretion confirmed by smear (St)**		with bacterioexcretion confirmed by culture (Ct)**		total drug susceptibility tests performed**		of them, number of MDR-TB cases**			
abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vinnyska	689	41,9	459	67,0	445	96,9	86	19,3	685	271	39,6	442	65,5	421	95,2	94	22,3			
3	Volynska	522	46,6	404	78,4	390	96,5	42	10,8	499	258	51,7	416	84,0	401	96,4	66	16,5			
4	Dnipropetrovska	2258	910	40,3	1330	59,2	1268	95,3	382	30,1	1745	707	40,5	1035	59,4	1005	97,1	327	32,5		
5	Donetska**	1016	526	51,8	580	59,1	580	100,0	181	31,2	1067	504	47,2	583	55,8	583	100,0	164	28,1		
6	Zhytomiryska	699	387	55,4	481	68,8	481	100,0	64	13,3	665	377	56,7	485	72,9	485	100,0	97	20,0		
7	Zakarpatzka	716	385	53,8	511	71,9	444	86,9	69	15,5	736	339	46,1	507	69,4	469	92,5	71	15,1		
8	Zaporizka	893	447	50,1	607	68,0	596	98,2	148	24,8	903	448	49,6	629	69,7	629	100,0	162	25,8		
9	Ivano-Frankivska	755	291	38,5	430	57,0	430	100,0	40	9,3	638	324	50,8	408	63,9	408	100,0	45	11,0		
10	Kyvska	1019	457	44,8	670	65,9	670	100,0	144	21,5	1018	389	38,2	595	59,7	595	100,0	109	18,3		
11	Kirovohradska	717	407	56,8	484	67,5	484	100,0	89	18,4	600	327	54,5	420	70,0	420	100,0	81	19,3		
12	Luhanska	267	139	52,1	102	52,3	97	95,1	41	42,3	336	133	39,6	178	57,1	159	89,3	16	10,1		
13	Lvvska	1319	533	40,4	788	59,7	728	92,4	55	7,6	1344	538	40,0	792	58,9	665	84,0	95	14,3		
14	Mykolaitvska	737	266	36,1	457	62,0	457	100,0	167	36,5	696	323	46,4	446	64,1	446	100,0	173	38,8		
15	Odeska	2123	923	43,5	1449	68,3	1428	98,6	384	26,9	2303	918	39,9	1448	62,9	1448	100,0	370	25,6		
16	Poltavska	744	288	38,7	430	59,4	383	89,1	97	25,3	753	307	40,8	453	60,6	445	98,2	88	19,8		
17	Rivnenska	547	278	50,8	371	67,8	354	95,4	31	8,8	531	282	53,1	372	70,1	367	98,7	38	10,4		
18	Sumska	526	318	60,5	362	69,6	352	97,2	56	15,9	534	318	59,6	412	77,2	399	96,8	64	16,0		
19	Teropilzka	357	122	34,2	231	64,7	231	100,0	38	16,5	413	140	33,9	253	61,3	253	100,0	39	15,4		
20	Kharkvska	976	488	50,0	714	73,2	632	88,5	170	26,9	999	489	48,9	733	73,4	660	90,0	197	29,8		
21	Khersonska	733	372	50,8	509	70,6	507	99,6	148	29,2	681	392	57,6	502	75,6	502	100,0	153	30,5		
22	Khmelnytska	617	214	34,7	369	59,8	369	100,0	53	14,4	587	198	33,7	331	57,6	331	100,0	58	17,5		
23	Cherkvska	593	306	51,6	421	71,0	421	100,0	55	13,1	531	280	52,7	372	70,1	371	99,7	93	25,1		
24	Chernivetska	325	231	71,1	268	82,5	268	100,0	42	15,7	254	168	66,1	206	81,1	206	100,0	16	7,8		
25	Chernihvska	606	290	47,9	434	71,6	420	96,8	92	21,9	590	288	48,8	441	74,9	420	95,2	89	21,2		
26	Kyiv City	1163	575	49,4	703	61,0	691	98,3	141	20,4	1170	584	49,9	716	62,0	707	98,7	123	17,4		
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	State Penitentiary Service of Ukraine	614	156	25,4	251	40,9	251	100,0	41	16,3	545	152	27,9	256	47,0	256	100,0	48	18,8		
29	Ministry of Defense of Ukraine	147	20	13,6	45	30,6	44	97,8	0	0,0	130	14	10,8	55	42,3	46	83,6	5	10,9		
Ukraine		21678	9861	45,5	13860	64,5	13421	96,8	2856	21,3	20953	9468	45,2	13486	64,8	13097	97,1	2881	22,0		

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB 07 (quarterly)";

** The data are used from the reporting form "Report on the Results of Testing Mycobacteria Tuberculosis Resistance to Antimycobacterial Drugs in Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, as per TB 11"

Table 35

No.	Administrative territories	Laboratory diagnostics of relapses and other cases of pulmonary TB retreatment																					
		2015						2016															
		Total*		with bacterioexcretion confirmed by smear (S+)**		with bacterioexcretion confirmed by culture (C+)**		total drug susceptibility tests performed***		of them, number of MDR-TB cases**		Total*		with bacterioexcretion confirmed by smear (S+)**		with bacterioexcretion confirmed by culture (C+)**		total drug susceptibility tests performed***		of them, number of MDR-TB cases**			
abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynyska	277	59,6	207	75,5	193	93,2	73	37,8	73	37,8	161	62,9	199	78,3	170	85,4	77	45,3	-	-	-	-
3	Volynska	285	179	62,8	249	89,2	242	97,2	112	46,3	230	146	63,5	212	92,6	198	93,4	105	53,0	-	-	-	-
4	Dnipropetrovska	1487	831	55,9	1077	73,1	1019	94,6	452	44,4	1799	1003	55,8	1204	67,3	1187	98,6	498	42,0	-	-	-	-
5	Donetska***	542	326	60,1	361	68,5	361	100,0	202	56,0	466	278	59,7	290	63,2	290	100,0	150	51,7	-	-	-	-
6	Zhytomyrska	364	253	69,5	306	84,1	306	100,0	129	42,2	341	214	62,8	270	79,2	270	100,0	108	40,0	-	-	-	-
7	Zakarpatska	368	250	67,9	270	74,4	230	85,2	118	51,3	340	221	65,0	239	71,8	196	82,0	96	49,0	-	-	-	-
8	Zaporizka	455	287	63,1	353	77,6	345	97,7	129	37,4	417	255	61,2	324	77,9	324	100,0	138	42,6	-	-	-	-
9	Ivano-Frankivska	434	207	47,7	282	65,0	282	100,0	47	16,7	361	212	58,7	258	71,5	258	100,0	57	22,1	-	-	-	-
10	Kyivska	422	234	55,5	311	74,9	311	100,0	124	39,9	307	166	54,1	212	70,7	212	100,0	94	44,3	-	-	-	-
11	Kirovohradska	305	222	72,8	210	68,9	210	100,0	109	51,9	287	210	73,2	193	67,2	193	100,0	100	51,8	-	-	-	-
12	Luhanska	147	95	64,6	70	64,2	66	94,3	33	50,0	179	107	59,8	135	79,9	119	88,1	14	11,8	-	-	-	-
13	Lvivska	727	369	50,8	510	70,2	405	79,4	109	26,9	570	281	49,3	393	69,2	332	84,5	59	17,8	-	-	-	-
14	Mykolaivska	551	232	42,1	386	70,1	386	100,0	228	59,1	485	297	61,2	382	78,8	382	100,0	192	50,3	-	-	-	-
15	Odeska	785	447	56,9	604	76,9	591	97,8	276	46,7	785	404	51,5	548	69,8	548	100,0	247	45,1	-	-	-	-
16	Poltavska	370	222	60,0	273	76,9	247	90,5	130	52,6	294	173	58,8	221	77,3	209	94,6	100	47,8	-	-	-	-
17	Rivnenska	204	130	63,7	166	81,4	156	94,0	42	26,9	193	123	63,7	146	75,6	137	93,8	42	30,7	-	-	-	-
18	Sumska	351	279	79,5	277	80,1	269	97,1	88	32,7	230	159	69,1	183	81,7	167	91,3	55	32,9	-	-	-	-
19	Ternopilska	136	70	51,5	108	79,4	108	100,0	40	37,0	152	72	47,4	117	77,0	117	100,0	42	35,9	-	-	-	-
20	Kharkivska	380	257	67,6	345	90,8	286	82,9	154	53,8	386	267	69,2	345	89,4	269	78,0	146	54,3	-	-	-	-
21	Khersonska	363	229	63,1	264	74,4	263	99,6	128	48,7	315	207	65,7	257	83,7	257	100,0	129	50,2	-	-	-	-
22	Khmelnyvska	334	149	44,6	231	69,2	231	100,0	99	42,9	288	94	32,6	155	54,2	155	100,0	72	46,5	-	-	-	-
23	Cherkaska	278	196	70,5	231	83,1	231	100,0	41	17,7	235	156	66,4	199	84,7	199	100,0	91	45,7	-	-	-	-
24	Chernivetska	184	142	77,2	161	87,5	161	100,0	32	19,9	138	111	80,4	125	90,6	125	100,0	14	11,2	-	-	-	-
25	Chernihivska	278	129	46,4	188	67,6	160	85,1	89	55,6	286	136	47,6	199	69,6	154	77,4	79	51,3	-	-	-	-
26	Kyiv City	439	283	64,5	270	63,1	266	98,5	95	35,7	402	287	71,4	295	75,3	290	98,3	113	39,0	-	-	-	-
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	State Penitentiary Service of Ukraine	705	194	27,5	302	42,8	302	100,0	90	29,8	510	179	35,1	284	55,7	284	100,0	54	19,0	-	-	-	-
29	Ministry of Defense of Ukraine	20	5	25,0	3	15,0	3	100,0	0	0,0	18	1	5,6	8	44,4	8	100,0	3	37,5	-	-	-	-
Ukraine		11191	6382	57,0	8015	72,4	7630	95,2	3169	41,5	10270	5920	57,6	7393	72,6	7050	95,4	2875	40,8	-	-	-	-

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB 07 (quarterly)".

** The data are used from the reporting form "Report on the Results of Testing Mycobacteria Tuberculosis Resistance to Antimycobacterial Drugs in Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, as per TB 11"

Таблиця 36

Detection of new cases and relapses of AFB+ tuberculosis in persons examined at the laboratories of the primary health care facilities of Ukraine							
No.	Administrative territories	2015			2016		
		Number of examined persons	Detection of AFB+ cases	%	Number of examined persons	Detection of AFB+ cases	%
1	AR Crimea	-	-	-	-	-	-
2	Vynnytska	6344	134	2,1	5541	142	2,6
3	Volynska	10081	146	1,4	9852	187	1,9
4	Dnipropetrovska	24578	580	2,4	22965	425	1,9
5	Donetska	10141	363	3,6	11007	388	3,5
6	Zhytomyrska	8246	524	6,4	8043	457	5,7
7	Zakarpatska	8899	158	1,8	7568	161	2,1
8	Zaporizka	8354	260	3,1	8014	398	5,0
9	Ivano-Frankivska	7560	198	2,6	7469	237	3,2
10	Kyivska	18522	393	2,1	18210	377	2,1
11	Kirovohradska	5862	262	4,5	6900	252	3,7
12	Luhanska	5838	106	1,8	7038	108	1,5
13	Livska	17895	205	1,1	29065	505	1,7
14	Mykolaiivska	10056	219	2,2	9075	263	2,9
15	Odeska	13554	606	4,5	10864	262	2,4
16	Poltavska	8242	234	2,8	9680	174	1,8
17	Rivnenska	5615	155	2,8	5035	135	2,7
18	Sumska	8185	214	2,6	8689	232	2,7
19	Terнопilська	8017	93	1,2	6831	97	1,4
20	Kharkivska	16204	376	2,3	13045	301	2,3
21	Khersonska	3516	202	5,7	4168	207	5,0
22	Khmelnytska	6769	158	2,3	5533	148	2,7
23	Cherkaska	5467	137	2,5	5335	155	2,9
24	Chemivetska	18683	190	1,0	13421	225	1,7
25	Chemihivska	3717	206	5,5	3429	159	4,6
26	Kyiv City	2184	128	5,9	2405	150	6,2
27	Sevastopol City	-	-	-	-	-	-
Ukraine		242529	6247	2,6	239182	6145	2,6

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB 07 (quarterly)"

Table 37

Pulmonary TB new cases detection results *														
No.	Administrative territories	2015						2016						
		Total number of new TB cases		Including		Total number of new TB cases	Including		Detected by smear		Including			
		abs. number	%	abs. number	%		abs. number	%	abs. number	%	abs. number	%		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	689	289	41,9	472	68,5	271	39,6	456	66,6	456	66,6	456	66,6
3	Volynska	522	243	46,6	407	78,0	258	51,7	416	83,4	416	83,4	416	83,4
4	Dnipropetrovska	2258	910	40,3	1384	61,3	707	40,5	1090	62,5	1090	62,5	1090	62,5
5	Donetska	1016	526	51,8	639	62,9	504	47,2	665	62,3	665	62,3	665	62,3
6	Zhytomyrska	699	387	55,4	501	71,7	377	56,7	500	75,2	500	75,2	500	75,2
7	Zakarpatska	716	385	53,8	535	74,7	339	46,1	537	73,0	537	73,0	537	73,0
8	Zaporizka	893	447	50,1	607	68,0	448	49,6	637	70,5	637	70,5	637	70,5
9	Ivano-Frankivska	755	291	38,5	430	57,0	324	50,8	408	63,9	408	63,9	408	63,9
10	Kyivska	1019	457	44,8	695	68,2	389	38,2	648	63,7	648	63,7	648	63,7
11	Kirovohradska	717	407	56,8	552	77,0	327	54,5	463	77,2	463	77,2	463	77,2
12	Luhanska	267	139	52,1	154	57,7	133	39,6	216	64,3	216	64,3	216	64,3
13	Lvivska	1319	533	40,4	845	64,1	538	40,0	810	60,3	810	60,3	810	60,3
14	Mykolajivska	737	266	36,1	487	66,1	323	46,4	474	68,1	474	68,1	474	68,1
15	Odeska	2123	923	43,5	1468	69,1	918	39,9	1498	65,0	1498	65,0	1498	65,0
16	Poltavska	744	288	38,7	458	61,6	307	40,8	471	62,5	471	62,5	471	62,5
17	Rivnenska	547	278	50,8	384	70,2	282	53,1	391	73,6	391	73,6	391	73,6
18	Sumska	526	318	60,5	400	76,0	318	59,6	428	80,1	428	80,1	428	80,1
19	Ternopil'ska	357	122	34,2	231	64,7	140	33,9	253	61,3	253	61,3	253	61,3
20	Kharkivska	976	488	50,0	714	73,2	489	48,9	733	73,4	733	73,4	733	73,4
21	Khersonska	733	372	50,8	533	72,7	392	57,6	532	78,1	532	78,1	532	78,1
22	Khmelnytska	617	214	34,7	369	59,8	198	33,7	331	56,4	331	56,4	331	56,4
23	Cherkaska	593	306	51,6	425	71,7	280	52,7	378	71,2	378	71,2	378	71,2
24	Chernivetska	325	231	71,1	268	82,5	168	66,1	206	81,1	206	81,1	206	81,1
25	Chernihivska	606	290	47,9	446	73,6	288	48,8	441	74,7	441	74,7	441	74,7
26	Kyiv City	1163	575	49,4	772	66,4	584	49,9	756	64,6	756	64,6	756	64,6
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		20917	9685	46,3	14176	67,8	9302	45,9	13738	67,7	13738	67,7	13738	67,7
	State Penitentiary Service of Ukraine	614	156	25,4	251	40,9	152	27,9	256	47,0	256	47,0	256	47,0
	Ministry of Defense of Ukraine	147	20	13,6	45	30,6	14	10,8	55	42,3	55	42,3	55	42,3
Ukraine		21678	9861	45,5	14472	66,8	9468	45,2	14049	67,1	14049	67,1	14049	67,1

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB.07 (quarterly)"

Table 38

Results of relapses and other pulmonary TB retreatment cases detection*													
No.	Administrative territories	2015					2016						
		Total		Including			Total		Including				
		abs. number	%	abs. number	abs. number	%	abs. number	%	abs. number	%	abs. number	%	
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-
2	Vimnytska	277	165	59,6	227	81,9	161	62,9	213	83,2			
3	Volynska	285	179	62,8	254	89,1	146	63,5	213	92,6			
4	Dnipropetrovska	1487	831	55,9	1152	77,5	1003	55,8	1316	73,2			
5	Donetska	542	326	60,1	435	80,3	278	59,7	359	77,0			
6	Zhytomyrska	364	253	69,5	322	88,5	214	62,8	291	85,3			
7	Zakarpatska	368	250	67,9	320	87,0	221	65,0	283	83,2			
8	Zaporizka	455	287	63,1	353	77,6	255	61,2	328	78,7			
9	Ivano-Frankivska	434	207	47,7	282	65,0	212	58,7	258	71,5			
10	Kyivska	422	234	55,5	337	79,9	166	54,1	236	76,9			
11	Kirovohradska	305	222	72,8	270	88,5	210	73,2	251	87,5			
12	Luhanska	147	95	64,6	105	71,4	107	59,8	143	79,9			
13	Lvovska	727	369	50,8	532	73,2	281	49,3	415	72,8			
14	Mykolajivska	551	332	42,1	404	73,3	297	61,2	399	82,3			
15	Odeska	785	447	56,9	613	78,1	404	51,5	582	74,1			
16	Poltavska	370	222	60,0	298	80,5	173	58,8	235	79,9			
17	Rivnenska	204	130	63,7	173	84,8	123	63,7	159	82,4			
18	Sumska	351	279	79,5	313	89,2	159	69,1	196	85,2			
19	Terнопil'ska	136	70	51,5	108	79,4	72	47,4	117	77,0			
20	Kharkivska	380	257	67,6	345	90,8	267	69,2	345	89,4			
21	Khersonska	363	229	63,1	281	77,4	207	65,7	265	84,1			
22	Khmelnytska	334	149	44,6	231	69,2	94	32,6	155	53,8			
23	Cherkaska	278	196	70,5	245	88,1	156	66,4	203	90,6			
24	Chernivetska	184	142	77,2	161	87,5	111	80,4	125	90,6			
25	Chernihivska	278	129	46,4	203	73,0	136	47,6	199	69,6			
26	Kyiv City	439	283	64,5	345	78,6	287	71,4	329	81,8			
27	Sevastopol City	-	-	-	-	-	-	-	-	-			
Total		10466	6183	59,1	8309	79,4	5740	58,9	7615	78,2			
State Penitentiary Service of Ukraine		705	194	27,5	302	42,8	179	35,1	285	55,9			
Ministry of Defense of Ukraine		20	1	5,0	4	20,0	1	5,6	8	44,4			
Ukraine		11191	6378	57,0	8615	77,0	10270	57,6	7908	77,0			

* The data are used from the reporting form No. 4 "Report on the Total Number of TB Cases of Categories I, II and III (as per the data of bacterioscopy and/or culture testing) TB.07 (quarterly)"

Table 39

Results of relapses and other pulmonary TB retreatment cases detection *														
No.	Administrative territories	Number of TB cases **			Treatment was started in the reporting year			Treatment was not started in the reporting year						
		Confirmed MDR-TB case	of them, XDR-TB	Total	of those confirmed in the reporting year	of those confirmed earlier	Died before beginning of treatment	Lack of second-line drugs	Refusal from treatment and/or patient's residence is unknown	Not subject to treatment by resistance profile	Disease incurability	Other		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vinnyska	201	42	217	197	20	1	0	2	0	1	0	0	
3	Volyrska	185	47	219	180	39	0	0	1	1	3	0	0	
4	Dnipropetrovska	982	101	1040	950	90	11	1	20	0	0	0	0	
5	Donetska	394	46	430	342	88	25	0	22	1	4	0	0	
6	Zhytomyrska	252	44	274	252	22	0	0	0	0	0	0	0	
7	Zakarpatska	221	49	340	220	120	0	0	1	0	0	0	0	
8	Zaporizka	369	62	451	365	86	0	0	3	1	0	0	0	
9	Ivano-Frankivska	129	19	183	128	55	0	0	1	0	0	0	0	
10	Kyvska	347	39	378	345	33	0	1	0	0	1	0	0	
11	Kirovohradska	254	22	238	228	10	5	0	17	1	3	0	0	
12	Luhanska	156	5	192	152	40	1	0	3	0	0	0	0	
13	Lvvska	256	39	260	246	14	2	0	8	0	0	0	0	
14	Mykolajivska	475	100	461	459	2	9	0	0	0	7	0	0	
15	Odeska	716	86	749	653	96	0	0	20	0	42	1	0	
16	Poltavska	221	81	265	202	63	3	0	14	0	0	2	0	
17	Rivnenska	110	15	120	110	10	0	0	0	0	0	0	0	
18	Sumska	153	13	171	151	20	0	0	1	0	0	1	0	
19	Ternopilska	100	15	120	100	20	0	0	0	0	0	0	0	
20	Kharkivska	374	77	420	369	51	0	0	5	0	0	0	0	
21	Khersonska	221	63	388	320	68	2	0	1	0	1	0	0	
22	Khmelnyrska	152	21	172	152	20	0	0	0	0	0	0	0	
23	Cherkaska	234	52	232	232	0	1	0	1	0	0	0	0	
24	Chernivetska	78	4	73	73	0	1	0	4	0	0	0	0	
25	Chernihivska	193	33	263	190	73	1	0	2	0	0	0	0	
26	Kyiv City	401	66	399	395	4	2	0	3	0	0	1	0	
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	
28	State Penitentiary Service of Ukraine	489	53	514	477	37	4	0	0	0	8	0	0	
29	Ministry of Defense of Ukraine	12	1	12	12	0	0	0	0	0	0	0	0	
Ukraine		7778	1195	8581	7500	1081	68	2	129	4	70	5	0	

* The data are used from the reporting form "Report on the Number of Patients Recorded under Category 4 (TB 07 - MDR-TB)"

** With newly confirmed MDR/XDR-TB during the reporting year

Table 40

No.	Administrative territories	Number of TB patients with firstly confirmed MDR or XDR-TB *											
		Absolute number					Total Number						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	Per 100,000 population**	
1	AR Crimea	314	472	-	-	-	16,1	24,1	-	-	-	-	-
2	Vynnytska	334	228	195	220	201	20,5	14,1	12,1	13,7	12,1	13,7	12,6
3	Volynska	128	198	265	215	185	12,4	19,1	25,5	20,7	25,5	20,7	17,8
4	Dnipropetrovska	1267	1002	1023	1001	982	38,2	30,3	31,1	30,6	31,1	30,6	30,2
5	Donevska	926	796	641	391	394	21,1	18,2	14,8	19,9	14,8	19,9	20,0
6	Zhytomyrska	125	192	222	246	252	9,8	15,1	17,6	19,6	17,6	19,6	20,2
7	Zakarpatska	136	129	262	265	221	10,9	10,3	20,9	21,1	20,9	21,1	17,6
8	Zaporizka	193	407	369	334	369	10,8	22,8	20,8	18,9	20,8	18,9	21,1
9	Ivano-Frankivska	235	226	215	122	129	17,1	16,4	15,6	8,8	15,6	8,8	9,4
10	Kyivska	269	267	280	399	347	15,7	15,6	16,3	23,2	16,3	23,2	20,1
11	Kirovohradska	328	274	246	272	254	32,9	27,7	25,1	27,9	25,1	27,9	26,3
12	Luhanska	441	588	138	101	156	19,4	26,1	6,2	14,0	6,2	14,0	21,9
13	Lvivska	377	427	287	370	256	14,9	16,9	11,4	14,7	11,4	14,7	10,2
14	Mykolajivska	159	473	360	462	475	13,5	40,3	30,8	39,7	30,8	39,7	41,0
15	Odeska	620	739	779	780	716	26,1	31,0	32,7	32,7	32,7	32,7	30,1
16	Poltavska	229	224	414	283	221	15,6	15,3	28,5	19,6	28,5	19,6	15,4
17	Rivnenska	105	117	134	92	110	9,1	10,1	11,6	7,9	11,6	7,9	9,5
18	Sumska	197	173	166	210	153	17,1	15,2	14,7	18,7	14,7	18,7	13,8
19	Terнопil'ska	94	91	113	94	100	8,7	8,5	10,6	8,8	10,6	8,8	9,4
20	Kharkiv'ska	459	474	361	340	374	16,8	17,4	13,3	12,5	13,3	12,5	13,8
21	Kherson'ska	404	372	348	333	324	37,3	34,5	32,5	31,2	32,5	31,2	30,5
22	Khmelnytska	112	128	175	238	152	8,5	9,8	13,4	18,3	13,4	18,3	11,8
23	Cherkaska	240	223	162	279	234	18,8	17,6	12,9	22,4	12,9	22,4	18,9
24	Chernivetska	57	121	98	124	78	6,3	13,4	10,8	13,7	10,8	13,7	8,6
25	Chernihiv'ska	188	185	182	242	193	17,4	17,3	17,2	23,1	17,2	23,1	18,6
26	Kyiv City	405	461	420	371	401	14,6	16,4	14,9	13,0	14,9	13,0	14,0
27	Sevastopol City	69	48	-	-	-	18,2	12,6	-	-	-	-	-
28	State Penitentiary Service of Ukraine	-	615	572	649	489	-	-	-	-	-	-	-
29	Ministry of Defense of Ukraine	-	0	5	7	12	-	-	-	-	-	-	-
	Ukraine	8411	9650	8432	8440	7778	18,5	21,3	19,7	19,7	19,7	19,7	18,3

* The data are used from the reporting form "Report on the Number of Confirmed Drug-Resistant Cases of TB That Started Treatment under Categories 4.1 - 4.3 During the Reporting Quarter (TB 07 - MDR-TB)"

** Calculation of the population is based on the form No. 20 "Health Care Facility Report" (HCF)

Table 41

Prevalence of all forms of active TB among the entire population of Ukraine *														
No.	Administrative territories	Absolute number						Per 100,000 population						
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	
1	AR Crimea	3246	2 526	-	-	-	-	166,1	137,8	-	-	-	-	-
2	Vynnytska	1798	1 261	1 081	1 099	1 062	1 105	110,5	83,2	72,0	68,5	66,6	66,6	
3	Volyńska	1808	1 062	878	913	849	174,5	116,8	116,8	94,6	87,8	81,6	81,6	
4	Dnipropetrovska	5839	3 977	3 724	3 996	3 717	176,0	133,8	133,8	125,5	122,1	114,3	114,3	
5	Donetska	5184	4 200	3 760	1 742	1 631	118,1	107,4	107,4	92,9	88,6	83,0	83,0	
6	Zhytomyrska	1799	1 216	1 202	1 360	1 314	141,2	106,9	106,9	104,6	108,2	105,3	105,3	
7	Zakarpatska	2055	1 485	1 443	1 479	1 397	164,7	125,0	125,0	119,1	117,7	111,2	111,2	
8	Zaporizka	2171	1 716	1 795	1 922	1 943	121,2	102,7	102,7	108,3	108,9	110,8	110,8	
9	Ivano-Frankivska	1574	1 039	868	921	836	114,3	78,8	78,8	66,8	66,7	60,6	60,6	
10	Kyivska	2143	1 714	1 681	1 979	1 919	125,0	108,3	108,3	106,9	114,8	111,2	111,2	
11	Kirovohradska	1593	1 162	1 126	1 115	994	159,9	124,0	124,0	119,7	114,5	102,8	102,8	
12	Luhanska	3333	2 623	615	604	669	147,0	133,7	133,7	30,4	84,0	93,9	93,9	
13	Lvovska	3245	2 231	1 955	1 859	1 751	128,6	98,8	98,8	85,4	73,8	69,6	69,6	
14	Mykolajivska	1926	1 427	1 442	1 540	1 508	163,6	130,1	130,1	130,0	132,3	130,3	130,3	
15	Odeska	3867	2 513	2 648	3 262	3 747	162,7	113,2	113,2	117,7	136,7	157,5	157,5	
16	Poltavska	1796	1 398	1 236	1 367	1 263	122,2	101,9	101,9	88,5	94,9	88,3	88,3	
17	Rivnenska	1812	1 153	917	969	942	157,1	112,0	112,0	88,1	83,5	81,2	81,2	
18	Sumska	1464	972	847	883	827	127,3	93,2	93,2	80,4	78,8	74,4	74,4	
19	Ternopilska	1046	725	625	590	619	97,1	76,1	76,1	64,9	55,3	58,3	58,3	
20	Kharkivska	3344	2 051	1 692	1 798	1 768	122,6	81,9	81,9	68,4	66,2	65,4	65,4	
21	Khersonska	2099	1 425	1 307	1 323	1 220	194,0	143,6	143,6	131,2	124,1	115,0	115,0	
22	Khmelnytska	1784	770	701	825	812	135,5	64,2	64,2	59,8	63,6	62,9	62,9	
23	Cherkaska	1935	1 046	880	1 036	997	151,9	95,6	95,6	82,5	83,0	80,4	80,4	
24	Chernivetska	1244	756	725	760	547	137,9	92,8	92,8	88,0	83,8	60,3	60,3	
25	Chernihivska	1492	1 105	1 000	1 072	1 000	138,2	111,4	111,4	99,6	102,4	96,5	96,5	
26	Kyiv City	1675	1 498	1 585	1 814	1 634	60,4	60,6	60,6	61,6	63,7	57,0	57,0	
27	Sevastopol City	477	325	-	-	-	125,8	95,2	95,2	-	-	-	-	
Ukraine		61749	43 376	35 733	36 228	34 966	135,9	104,9	104,9	90,2	84,7	82,1	82,1	

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 42

Prevalence of all forms of active TB among children aged 0-14 years inclusive *													
No.	Administrative territories	Absolute number					Per 100,000 of the respective population						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	28	29	-	-	-	9,9	9,9	-	-	-	-	-
2	Vynnytska	21	14	9	12	8	8,7	5,8	3,7	4,9	3,3	3,3	3,3
3	Volynska	16	15	9	6	11	8,2	7,6	4,5	3,0	5,4	5,4	5,4
4	Dnipropetrovska	81	80	67	79	78	17,6	17,1	14,1	16,2	15,8	15,8	15,8
5	Donetska	46	58	36	24	28	8,5	10,5	6,5	9,1	10,6	10,6	10,6
6	Zhytomyrska	23	22	28	39	24	11,5	11,0	13,9	19,1	11,7	11,7	11,7
7	Zakarpatska	12	10	12	13	15	5,1	4,2	5,0	5,3	6,0	6,0	6,0
8	Zaporizka	23	20	23	36	65	9,7	8,3	9,4	14,4	25,8	25,8	25,8
9	Ivano-Frankivska	11	8	8	12	8	4,8	3,5	3,4	5,1	3,4	3,4	3,4
10	Kyivska	28	49	27	31	31	11,2	19,1	10,3	11,4	11,1	11,1	11,1
11	Kirovohradska	10	20	13	6	13	7,1	14,1	9,1	4,2	9,0	9,0	9,0
12	Luhanska	44	33	5	10	8	16,0	11,9	1,8	11,0	8,7	8,7	8,7
13	Lvivska	28	15	21	20	43	7,1	3,8	5,3	4,9	10,5	10,5	10,5
14	Mykolajivska	16	7	13	16	15	9,4	4,1	7,5	9,1	8,4	8,4	8,4
15	Odeska	46	40	34	37	48	12,8	10,9	9,0	9,6	12,2	12,2	12,2
16	Poltavska	5	5	3	7	6	2,6	2,6	1,5	3,5	3,0	3,0	3,0
17	Rivnenska	29	27	8	17	15	12,9	11,9	3,5	7,3	6,4	6,4	6,4
18	Sumska	2	7	3	5	10	1,4	4,8	2,1	3,4	6,8	6,8	6,8
19	Ternopil'ska	9	9	1	8	3	5,3	5,3	0,6	4,7	1,8	1,8	1,8
20	Kharkivska	25	26	34	29	13	7,4	7,5	9,7	8,1	3,6	3,6	3,6
21	Khersonska	28	20	15	14	21	17,3	12,3	9,1	8,4	12,5	12,5	12,5
22	Khmelnytska	8	7	8	12	12	4,1	3,5	4,0	6,0	5,9	5,9	5,9
23	Cherkaska	39	21	15	18	22	22,9	12,4	8,8	10,5	12,8	12,8	12,8
24	Chernivetska	12	9	4	7	1	8,0	6,0	2,6	4,5	0,6	0,6	0,6
25	Chernihivska	10	8	6	11	15	7,2	5,8	4,3	7,9	10,8	10,8	10,8
26	Kyiv City	28	40	24	25	18	7,4	10,1	5,8	5,8	4,0	4,0	4,0
27	Sevastopol City	4	5	-	-	-	7,7	9,2	-	-	-	-	-
Ukraine		659	632	426	494	531	10,1	9,7	6,7	7,7	8,2	8,2	8,2

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 43

Prevalence of all forms of active TB among children aged 15-17 years old inclusive *													
No.	Administrative territories	Absolute number					Per 100,000 of the respective population						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	9	15	-	-	0	16,1	28,6	-	-	-	0,0	
2	Vynnytska	10	9	10	3	2	17,5	16,4	19,4	6,2	4,3		
3	Volyńska	6	7	5	11	9	15,1	18,5	13,6	31,1	25,8		
4	Dnipropetrovska	33	28	26	33	20	34,2	30,9	30,7	40,8	25,9		
5	Donetska	30	30	20	7	6	25,2	26,9	18,8	14,8	12,7		
6	Zhytomyrska	6	7	6	8	7	12,9	15,9	14,4	20,7	19,0		
7	Zakarpatska	17	9	11	8	10	34,8	19,0	24,1	18,3	23,4		
8	Zaporizka	11	16	14	19	15	21,6	33,1	30,9	44,8	36,7		
9	Ivano-Frankivska	15	5	7	9	6	28,2	9,8	14,5	19,8	13,7		
10	Kyivska	18	18	13	18	8	33,0	34,7	27,0	39,8	18,7		
11	Kirovohradska	5	11	12	9	7	15,1	35,9	42,6	34,4	27,8		
12	Luhanska	10	23	4	2	2	16,4	40,8	7,5	11,4	11,6		
13	Lvivska	20	18	19	12	20	21,8	20,6	22,7	15,3	26,5		
14	Mykolajivska	15	11	10	21	12	39,1	30,4	29,6	66,0	39,5		
15	Odeska	27	29	21	33	22	35,4	39,7	30,1	50,5	35,3		
16	Poltavska	5	5	10	8	4	10,9	11,5	24,6	21,2	11,1		
17	Rivnenska	7	7	9	7	2	14,8	15,2	20,2	16,3	4,8		
18	Sumska	5	7	2	7	6	14,2	21,0	6,3	23,7	21,3		
19	Ternopil'ska	8	5	11	2	3	20,1	13,0	30,1	5,8	9,1		
20	Kharkivska	21	15	11	7	6	28,1	20,9	16,1	10,9	9,8		
21	Khersonska	16	13	13	9	8	44,1	37,7	40,2	29,5	27,4		
22	Khmelnytska	11	5	1	4	10	24,2	11,5	2,4	10,5	27,5		
23	Cherkaska	7	8	15	10	10	17,0	20,4	40,7	29,2	31,2		
24	Chernivetska	6	3	6	6	2	17,1	8,8	18,3	19,2	6,7		
25	Chernihivska	1	4	7	5	3	3,1	13,3	24,7	18,9	11,9		
26	Kyiv City	10	8	6	9	11	13,2	10,9	8,5	13,7	17,0		
27	Sevastopol City	1	4	-	-	0	11,1	45,7	-	-	0,0		
Ukraine		330	320	269	267	211	22,9	23,4	21,7	22,9	18,8		

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 44

Prevalence of all forms of active TB among children aged 0-17 years inclusive *													
No.	Administrative territories	Absolute number					Per 100,000 population						
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	40	44	-	-	0	11,8	12,8	-	-	0,0		
2	Vynnytska	31	23	19	15	10	10,4	7,7	6,5	5,1	3,4		
3	Volynska	23	22	14	17	20	9,8	9,4	5,9	7,2	8,4		
4	Dnipropetrovska	116	108	93	112	98	20,9	19,4	16,6	19,7	17,4		
5	Donezka	77	88	56	31	34	11,6	13,3	8,4	9,9	10,9		
6	Zhytomyrska	32	29	34	47	31	13,0	11,8	14,0	19,3	12,8		
7	Zakarpatska	29	19	23	21	25	10,2	6,6	8,0	7,2	8,6		
8	Zaporizka	36	36	37	55	80	12,5	12,4	12,8	18,8	27,3		
9	Ivano-Frankivska	28	13	15	21	14	9,9	4,6	5,3	7,5	5,0		
10	Kyivska	49	67	40	49	39	16,0	21,7	12,8	15,5	12,1		
11	Kirovohradska	15	31	25	15	20	8,6	18,0	14,6	8,8	11,6		
12	Luhanska	61	56	9	12	10	18,2	16,7	2,7	10,8	9,2		
13	Lvivska	52	33	40	32	63	10,7	6,8	8,3	6,6	13,0		
14	Mykolajivska	31	18	23	37	27	14,8	8,6	11,1	17,7	13,0		
15	Odeska	82	69	55	70	70	18,8	15,6	12,3	15,5	15,4		
16	Poltavska	10	10	13	15	10	4,2	4,2	5,5	6,4	4,3		
17	Rivnenska	37	34	17	24	17	13,6	12,4	6,2	8,7	6,1		
18	Sumska	10	14	5	12	16	5,6	7,8	2,8	6,8	9,2		
19	Ternopilska	23	14	12	10	6	11,0	6,8	5,9	4,9	3,0		
20	Kharkivska	53	41	45	36	19	12,8	9,8	10,7	8,5	4,5		
21	Khersonska	46	33	28	23	29	23,3	16,7	14,2	11,7	14,7		
22	Khmelnytska	21	12	9	16	22	8,7	5,0	3,8	6,7	9,2		
23	Cherkaska	51	29	30	28	32	24,1	13,9	14,5	13,6	15,7		
24	Chernivetska	19	12	10	13	3	10,3	6,5	5,4	7,0	1,6		
25	Chernihivska	12	12	13	16	18	7,1	7,1	7,8	9,7	10,9		
26	Kyiv City	40	48	30	34	29	8,8	10,2	6,2	6,9	5,7		
27	Sevastopol City	5	9	-	-	0	8,2	14,3	-	-	0,0		
Ukraine		1 029	924	695	761	742	12,9	11,6	9,2	10,0	9,8		

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 45

Number of patients registered under Category 5 among the total population of Ukraine *													
No.	Administrative territories	Absolute number						Per 100,000 population					
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	
1	AR Crimea	22 772	20 258	-	-	0	1 165,3	1 035,5	-	-	-	0,0	
2	Vynnytska	16 292	15 997	13 844	18 367	15 952	1 001,3	987,5	859,2	1 145,4	1 000,1		
3	Volynska	7 821	8 597	11 334	15 381	16 635	755,0	828,8	1 091,3	1 478,7	1 599,6		
4	Dnipropetrovska	24 100	21 602	28 702	37 140	28 061	726,6	653,7	872,6	1 134,6	863,0		
5	Donetska	25 919	23 723	24 892	19 390	15 158	590,4	543,8	574,7	986,5	771,2		
6	Zhytomyrska	10 604	7 408	6 669	8 271	7 066	832,4	583,5	527,9	658,1	566,0		
7	Zakarpatska	12 122	10 529	10 692	18 876	14 221	971,4	841,3	852,6	1 502,0	1 132,0		
8	Zaporizka	16 861	13 208	18 011	10 371	10 023	941,5	740,2	1 014,7	587,5	571,8		
9	Ivano-Frankivska	11 917	9 161	11 938	16 373	13 611	865,2	664,3	865,5	1 186,6	986,6		
10	Kyivska	9 888	8 684	10 534	13 437	14 553	577,0	506,0	612,5	779,7	842,9		
11	Kirovohradska	8 930	8 052	7 688	7 950	7 273	896,6	814,4	783,6	816,1	752,3		
12	Luhanska	15 549	12 589	3 491	3 665	2 848	685,6	559,0	156,2	509,4	399,9		
13	Lvovska	14 527	10 744	29 088	8 539	7 462	575,9	426,0	1 154,3	338,9	296,6		
14	Mykolajivska	8 610	6 967	7 750	10 044	7 105	731,2	594,1	663,7	863,2	613,8		
15	Odeska	21 421	17 922	29 414	32 591	30 907	901,1	751,7	1 233,1	1 366,3	1 299,0		
16	Poltavska	11 238	10 491	10 927	10 950	10 137	764,8	718,6	753,4	759,8	708,3		
17	Rivnenska	10 499	10 602	11 267	14 842	12 560	910,4	917,3	973,1	1 279,4	1 082,1		
18	Sumska	9 624	8 449	8 652	9 413	7 948	836,8	740,5	765,1	839,5	715,4		
19	Ternopil'ska	7 363	6 619	10 420	11 307	9 111	683,5	616,3	973,8	1 060,0	857,5		
20	Kharkivska	22 850	21 682	23 323	23 023	20 095	838,1	794,6	857,0	847,8	743,4		
21	Khersonska	12 662	10 624	9 338	12 785	9 584	1 170,3	986,6	871,8	1 198,8	903,4		
22	Khmelnytska	8 488	5 692	14 220	25 048	17 036	644,5	434,2	1 090,6	1 929,6	1 319,3		
23	Cherkaska	17 157	11 963	12 340	12 601	11 629	1 347,0	945,5	982,2	1 009,5	938,3		
24	Chernivetska	6 147	5 042	5 409	7 516	5 271	681,3	557,7	597,4	828,8	581,3		
25	Chernihivska	7 563	6 660	5 135	5 711	3 933	700,3	622,9	485,2	545,4	379,5		
26	Kyiv City	12 387	8 969	18 839	9 956	7 480	446,7	319,9	666,3	349,7	261,1		
27	Sevastopol City	5 784	4 319	-	-	0	1 525,0	1 132,2	-	-	0,0		
Ukraine		359 095	306 553	343 917	363 547	305 659	790,0	675,6	801,6	850,2	717,7		

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 46

Prevalence of all forms of active TB in combination with HIV-associated disease *													
No.	Administrative territories	Absolute number						Per 100,000 population					
		2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017
1	AR Crimea	497	460	-	-	-	-	25,4	23,5	-	-	-	-
2	Vynnytska	63	67	79	85	107	107	3,9	4,1	4,9	5,3	6,7	6,7
3	Volyńska	64	63	44	53	64	64	6,2	6,1	4,2	5,1	6,2	6,2
4	Dnipropetrovska	1 519	1 083	1 126	1 200	1 072	1 072	45,8	32,8	34,2	36,7	33,0	33,0
5	Donetska	1 240	1 114	1 140	494	493	493	28,2	25,5	26,3	25,1	25,1	25,1
6	Zhytomyrska	126	115	140	153	180	180	9,9	9,1	11,1	12,2	14,4	14,4
7	Zakarpatska	18	27	28	35	37	37	1,4	2,2	2,2	2,8	2,9	2,9
8	Zaporizka	187	168	211	240	269	269	10,4	9,4	11,9	13,6	15,3	15,3
9	Ivano-Frankivska	40	44	43	52	48	48	2,9	3,2	3,1	3,8	3,5	3,5
10	Kyivska	258	243	320	444	473	473	15,1	14,2	18,6	25,8	27,4	27,4
11	Kirovohradska	148	157	189	213	192	192	14,9	15,9	19,3	21,9	19,9	19,9
12	Luhanska	281	293	90	92	104	104	12,4	13,0	4,0	12,8	14,6	14,6
13	Lvivska	154	139	148	180	203	203	6,1	5,5	5,9	7,1	8,1	8,1
14	Mykolajivska	406	363	356	360	380	380	34,5	31,0	30,5	30,9	32,8	32,8
15	Odeska	727	685	770	929	1 151	1 151	30,6	28,7	32,3	38,9	48,4	48,4
16	Poltavska	155	181	142	140	151	151	10,5	12,4	9,8	9,7	10,6	10,6
17	Rivnenska	69	66	65	53	60	60	6,0	5,7	5,6	4,6	5,2	5,2
18	Sumska	42	38	67	60	59	59	3,7	3,3	5,9	5,4	5,3	5,3
19	Ternopilska	22	20	15	23	39	39	2,0	1,9	1,4	2,2	3,7	3,7
20	Kharkivska	178	132	132	153	114	114	6,5	4,8	4,9	5,6	4,2	4,2
21	Khersonska	240	216	236	217	188	188	22,2	20,1	22,0	20,3	17,7	17,7
22	Khmelnytska	116	77	63	96	99	99	8,8	5,9	4,8	7,4	7,7	7,7
23	Cherkaska	276	207	193	199	207	207	21,7	16,4	15,4	15,9	16,7	16,7
24	Chernivetska	29	27	31	48	34	34	3,2	3,0	3,4	5,3	3,7	3,7
25	Chernihivska	170	150	161	172	197	197	15,7	14,0	15,2	16,4	19,0	19,0
26	Kyiv City	344	379	427	494	465	465	12,4	13,5	15,1	17,4	16,2	16,2
27	Sevastopol City	87	85	-	-	-	-	22,9	22,3	-	-	-	-
Ukraine		7 456	6 599	6 216	6 185	6 386	6 386	16,4	14,5	14,5	14,5	15,0	15,0

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 47

Treatment outcomes of pulmonary TB new cases with positive smear microscopy tests for AFB, 2015 cohort *																	
No.	Administrative territories	Total number of cases				Effective treatment				Died		Treatment failure		Treatment interruption		Transferred out/referred	
		of them, transferred to Cat. 4		Cured		Treatment completed		abs.		abs.		S+		CI-Rö		abs.	
		abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vinnyska	289	25,3	89	41,2	60	27,8	25	11,6	28	13,0	2	0,9	11	5,1	1	0,5
3	Volynska	243	14,4	88	42,3	78	37,5	19	9,1	10	4,8	0	0,0	13	6,3	0	0,0
4	Dnipropetrovska	910	32,1	283	45,8	94	15,2	100	16,2	80	12,9	21	3,4	40	6,5	0	0,0
5	Donetska	526	31,6	195	54,2	17	4,7	67	18,6	44	12,2	6	1,7	31	8,6	0	0,0
6	Zhytomyrska	387	15,2	172	52,4	34	10,4	43	13,1	60	18,3	1	0,3	18	5,5	0	0,0
7	Zakarpatska	385	24,4	213	73,2	4	1,4	13	4,5	28	9,6	4	1,4	29	10,0	0	0,0
8	Zaporizka	447	27,7	127	39,3	69	21,4	43	13,3	57	17,6	4	1,2	23	7,1	0	0,0
9	Ivano-Frankivska	291	17,5	145	60,4	5	2,1	26	10,8	22	9,2	22	9,2	19	7,9	1	0,4
10	Kyivska	457	24,5	126	36,5	113	32,8	31	9,0	33	9,6	10	2,9	32	9,3	0	0,0
11	Kirovohradska	407	21,9	74	23,3	149	46,9	44	13,8	31	9,7	3	0,9	17	5,3	0	0,0
12	Luhanska	143	35,7	16	17,4	27	29,3	16	17,4	24	26,1	1	1,1	5	5,4	3	3,3
13	Lvivska	533	17,1	208	47,1	104	23,5	36	8,1	57	12,9	3	0,7	34	7,7	0	0,0
14	Mykolajivska	266	44,0	71	47,7	34	22,8	21	14,1	4	2,7	3	2,0	15	10,1	1	0,7
15	Odeska	923	26,5	408	60,2	4	0,6	103	15,2	60	8,8	13	1,9	89	13,1	1	0,1
16	Poltavska	288	27,4	139	66,5	8	3,8	23	11,0	22	10,5	2	1,0	14	6,7	1	0,5
17	Rivnenska	278	9,4	140	55,6	53	21,0	25	9,9	26	10,3	1	0,4	6	2,4	1	0,4
18	Sumska	318	20,1	136	53,5	36	14,2	34	13,4	31	12,2	1	0,4	16	6,3	0	0,0
19	Ternopil'ska	122	21,3	23	24,0	55	57,3	9	9,4	5	5,2	1	1,0	3	3,1	0	0,0
20	Kharkivska	488	27,5	202	57,1	35	9,9	33	9,3	49	13,8	6	1,7	29	8,2	0	0,0
21	Khersonska	372	35,8	91	38,1	75	31,4	27	11,3	23	9,6	6	2,5	17	7,1	0	0,0
22	Khmelnytska	214	47	114	68,3	2	1,2	20	12,0	17	10,2	10	6,0	4	2,4	0	0,0
23	Cherkaska	306	24,2	139	59,9	25	10,8	28	12,1	25	10,8	2	0,9	12	5,2	1	0,4
24	Chernivetska	231	19,0	71	38,0	52	27,8	18	9,6	16	8,6	4	2,1	21	11,2	5	2,7
25	Chernihivska	290	23,1	85	38,1	61	27,4	26	11,7	30	13,5	5	2,2	15	6,7	1	0,4
26	Kyiv City	575	22,4	177	39,7	122	27,4	53	11,9	45	10,1	10	2,2	39	8,7	0	0,0
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		9689	2422	25,0	48,6	1316	18,1	883	12,2	827	11,4	141	1,9	552	7,6	16	0,2
State Penitentiary Service of Ukraine		156	50	32,1	21,7	44	41,5	8	7,5	12	11,3	4	3,8	8	7,5	7	6,6
Ministry of Defense of Ukraine		20	0	0,0	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
Ukraine		9665	2472	25,1	48,4	1360	18,4	891	12,1	839	11,3	145	2,0	560	7,6	23	0,3

* The data are used from the reporting form No. 8-1 "Report on Treatment Outcomes for Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, TB 08" (quarterly)

Table 48

No.		Administrative territories		Treatment outcomes of pulmonary TB new cases and relapses, 2015 cohort *																									
				Total number of cases				Effective treatment				Died				Treatment failure				Treatment interruption				Transferred out/referred					
				of them, transferred to Cat. 4		Cured		Treatment completed		abs.		%		abs.		%		abs.		%		abs.		%		abs.		%	
				abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%		
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2	Vynnytska	891	206	23,1	149	21,8	395	57,7	60	8,8	60	8,8	40	5,8	8	1,2	32	4,7	1	0,1	1	0,1	1	0,1					
3	Volynska	725	150	20,7	166	28,9	296	51,5	51	8,9	51	8,9	18	3,1	3	0,5	40	7,0	1	0,2	1	0,2	1	0,2					
4	Dnipropetrovska	2837	706	24,9	447	21,0	1102	51,7	254	11,9	254	11,9	136	6,4	55	2,6	133	6,2	4	0,2	4	0,2	4	0,2					
5	Donetska	1275	309	24,2	284	29,4	361	37,4	155	16,0	155	16,0	84	8,7	20	2,1	62	6,4	0	0,0	0	0,0	0	0,0					
6	Zhytomyrska	932	186	20,0	268	35,9	241	32,3	87	11,7	87	11,7	97	13,0	6	0,8	47	6,3	0	0,0	0	0,0	0	0,0					
7	Zakarpatska	808	207	25,6	321	53,4	163	27,1	24	4,0	24	4,0	32	5,3	4	0,7	57	9,5	0	0,0	0	0,0	0	0,0					
8	Zaporizka	1130	302	26,7	146	17,6	466	56,3	72	8,7	72	8,7	79	9,5	11	1,3	53	6,4	1	0,1	1	0,1	1	0,1					
9	Ivano-Frankivska	987	129	13,1	246	28,7	397	46,3	68	7,9	68	7,9	36	4,2	49	5,7	60	7,0	2	0,2	2	0,2	2	0,2					
10	Kyivska	1240	288	23,2	144	15,1	560	58,8	87	9,1	87	9,1	53	5,6	36	3,8	72	7,6	0	0,0	0	0,0	0	0,0					
11	Kirovohradska	863	206	23,9	109	16,6	381	58,0	95	14,5	95	14,5	39	5,9	4	0,6	29	4,4	0	0,0	0	0,0	0	0,0					
12	Luhanska	332	94	28,3	22	9,2	121	50,8	31	13,0	31	13,0	34	14,3	7	2,9	18	7,6	5	2,1	5	2,1	5	2,1					
13	Lvivska	1786	315	17,6	261	17,7	787	53,5	141	9,6	141	9,6	125	8,5	17	1,2	140	9,5	0	0,0	0	0,0	0	0,0					
14	Mykolajivska	924	297	32,1	166	26,5	347	55,3	57	9,1	57	9,1	11	1,8	12	1,9	31	4,9	3	0,5	3	0,5	3	0,5					
15	Odeska	2583	661	25,6	780	40,6	559	29,1	265	13,8	265	13,8	85	4,4	33	1,7	198	10,3	2	0,1	2	0,1	2	0,1					
16	Poltavska	1000	241	24,1	278	36,6	320	42,2	68	9,0	68	9,0	39	5,1	8	1,1	44	5,8	2	0,3	2	0,3	2	0,3					
17	Rivnenska	705	97	13,8	183	30,1	322	53,0	50	8,2	50	8,2	33	5,4	1	0,2	18	3,0	1	0,2	1	0,2	1	0,2					
18	Sumska	710	155	21,8	212	38,2	197	35,5	65	11,7	65	11,7	50	9,0	3	0,5	25	4,5	3	0,5	3	0,5	3	0,5					
19	Ternopil'ska	477	99	20,8	31	8,2	272	72,0	42	11,1	42	11,1	7	1,9	3	0,8	22	5,8	1	0,3	1	0,3	1	0,3					
20	Kharkivska	1195	336	28,1	229	26,7	433	50,4	65	7,6	65	7,6	62	7,2	11	1,3	59	6,9	0	0,0	0	0,0	0	0,0					
21	Khersonska	952	300	31,5	135	20,7	362	55,5	65	10,0	65	10,0	33	5,1	15	2,3	42	6,4	0	0,0	0	0,0	0	0,0					
22	Khmelnyvska	825	170	20,6	240	36,6	254	38,8	68	10,4	68	10,4	28	4,3	39	6,0	26	4,0	0	0,0	0	0,0	0	0,0					
23	Cherkaska	767	205	26,7	182	32,4	242	43,1	68	12,1	68	12,1	32	5,7	8	1,4	29	5,2	1	0,2	1	0,2	1	0,2					
24	Chernivetska	449	93	20,7	113	31,7	136	38,2	32	9,0	32	9,0	22	6,2	9	2,5	35	9,8	9	2,5	9	2,5	9	2,5					
25	Chernihivska	825	192	23,3	142	22,4	312	49,3	73	11,5	73	11,5	45	7,1	12	1,9	48	7,6	1	0,2	1	0,2	1	0,2					
26	Kyiv City	1368	263	19,2	226	20,5	614	55,6	112	10,1	112	10,1	57	5,2	21	1,9	73	6,6	2	0,2	2	0,2	2	0,2					
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Total		26586	6207	23,3	5480	26,9	9640	47,3	2155	10,6	2155	10,6	1277	6,3	395	1,9	1393	6,8	39	0,2	39	0,2	39	0,2					
State Penitentiary Service of Ukraine		1115	268	24,0	89	10,5	490	57,9	19	2,2	19	2,2	44	5,2	49	5,8	79	9,3	77	9,1	77	9,1	77	9,1					
Ministry of Defense of Ukraine		167	0	0,0	49	29,3	118	70,7	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0					
Ukraine		27868	6475	23,2	5618	26,3	10248	47,9	2174	10,2	2174	10,2	1321	6,2	444	2,1	1472	6,9	116	0,5	116	0,5	116	0,5					

* The data are used from the reporting form No. 8-1 "Report on Treatment Outcomes for Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, TB 08" (quarterly)

Table 49

No.		Administrative territories		Treatment outcomes of new pulmonary TB cases, 2015 cohort *																									
				Total number of cases				Effective treatment				Died				Treatment failure				Treatment interruption				Transferred out/referred					
				of them, transferred to Cat. 4		Cured		Treatment completed		abs.		%		abs.		%		S+		CI-Rö		abs.		%		abs.		%	
				abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2	Vinnyska	689	17,9	127	22,4	329	58,1	47	8,3	29	5,1	6	1,1	27	4,8	1	0,2	-	-	-	-	-	-	-	-	-	-		
3	Volynska	522	10,2	145	30,9	245	52,2	35	7,5	13	2,8	1	0,2	30	6,4	0	0,0	-	-	-	-	-	-	-	-	-	-		
4	Dnipropetrovska	2258	20,5	380	21,2	963	53,6	200	11,1	106	5,9	44	2,5	99	5,5	3	0,2	-	-	-	-	-	-	-	-	-	-		
5	Donetska	1016	20,6	236	29,2	315	39,0	125	15,5	66	8,2	15	1,9	50	6,2	0	0,0	-	-	-	-	-	-	-	-	-	-		
6	Zhytomyrska	699	12,2	229	37,3	207	33,7	66	10,7	73	11,9	6	1,0	33	5,4	0	0,0	-	-	-	-	-	-	-	-	-	-		
7	Zakarpatska	716	21,5	297	52,8	160	28,5	18	3,2	29	5,2	4	0,7	54	9,6	0	0,0	-	-	-	-	-	-	-	-	-	-		
8	Zaporizka	893	21,3	127	18,1	390	55,5	60	8,5	67	9,5	9	1,3	49	7,0	1	0,1	-	-	-	-	-	-	-	-	-	-		
9	Ivano-Frankivska	755	9,5	203	29,7	320	46,9	51	7,5	24	3,5	38	5,6	45	6,6	2	0,3	-	-	-	-	-	-	-	-	-	-		
10	Kyivska	1019	18,9	126	15,3	498	60,3	72	8,7	38	4,6	31	3,8	61	7,4	0	0,0	-	-	-	-	-	-	-	-	-	-		
11	Kirovohradska	717	18,7	95	16,3	341	58,5	82	14,1	34	5,8	4	0,7	27	4,6	0	0,0	-	-	-	-	-	-	-	-	-	-		
12	Luhanska	262	26,7	18	9,4	100	52,1	24	12,5	30	15,6	6	3,1	11	5,7	3	1,6	-	-	-	-	-	-	-	-	-	-		
13	Lvivska	1316	17,9	136	21,5	18,9	63,6	55,9	88	7,7	87	7,7	15	1,3	96	8,4	0	0,0	-	-	-	-	-	-	-	-	-		
14	Mykolajivska	737	20,6	151	28,4	292	55,0	40	7,5	7	1,3	9	1,7	29	5,5	3	0,6	-	-	-	-	-	-	-	-	-	-		
15	Odeska	2123	20,6	700	41,5	490	29,1	220	13,1	70	4,2	31	1,8	172	10,2	2	0,1	-	-	-	-	-	-	-	-	-	-		
16	Poltavska	744	16,9	228	36,9	277	44,8	47	7,6	28	4,5	5	0,8	31	5,0	2	0,3	-	-	-	-	-	-	-	-	-	-		
17	Rivnenska	545	8,3	153	30,6	267	53,4	42	8,4	26	5,2	1	0,2	10	2,0	1	0,2	-	-	-	-	-	-	-	-	-	-		
18	Sumska	526	14,8	172	38,4	166	37,1	51	11,4	34	7,6	3	0,7	21	4,7	1	0,2	-	-	-	-	-	-	-	-	-	-		
19	Ternopil'ska	357	15,4	23	7,6	226	74,8	28	9,3	5	1,7	3	1,0	17	5,6	0	0,0	-	-	-	-	-	-	-	-	-	-		
20	Kharkivska	976	21,6	202	26,4	400	52,3	49	6,4	53	6,9	10	1,3	51	6,7	0	0,0	-	-	-	-	-	-	-	-	-	-		
21	Khersonska	733	26,2	115	21,3	305	56,4	49	9,1	30	5,5	9	1,7	33	6,1	0	0,0	-	-	-	-	-	-	-	-	-	-		
22	Khmelnytska	617	14,6	201	38,1	213	40,4	47	8,9	19	3,6	27	5,1	20	3,8	0	0,0	-	-	-	-	-	-	-	-	-	-		
23	Cherkaska	593	11,5	19,4	33,5	213	44,6	52	10,9	26	5,4	7	1,5	19	4,0	1	0,2	-	-	-	-	-	-	-	-	-	-		
24	Chernivetska	324	17,6	83	31,1	100	37,5	22	8,2	18	6,7	8	3,0	27	10,1	9	3,4	-	-	-	-	-	-	-	-	-	-		
25	Chernihivska	606	17,3	123	24,6	249	49,7	46	9,2	36	7,2	7	1,4	39	7,8	1	0,2	-	-	-	-	-	-	-	-	-	-		
26	Kyiv City	1163	15,9	201	20,6	557	57,0	90	9,2	50	5,1	17	1,7	61	6,2	2	0,2	-	-	-	-	-	-	-	-	-	-		
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total		20906	18,3	4710	27,6	8259	48,4	1651	9,7	998	5,8	316	1,9	1112	6,5	32	0,2	-	-	-	-	-	-	-	-	-	-		
	State Penitentiary Service of Ukraine	613	16,0	57	11,1	317	61,6	15	2,9	25	4,9	23	4,5	41	8,0	37	7,2	-	-	-	-	-	-	-	-	-	-	-	
	Ministry of Defense of Ukraine	147	0,0	45	30,6	102	69,4	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	-	-	-	-	-	-	-	-	-	-	-	
Ukraine		21666	18,1	4812	27,1	8678	48,9	1666	9,4	1023	5,8	339	1,9	1153	6,5	69	0,4	-	-	-	-	-	-	-	-	-	-	-	

* The data are used from the reporting form No. 8-1 "Report on Treatment Outcomes for Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, TB 08" (quarterly)

Table 50

Treatment outcomes of pulmonary TB relapses, 2015 cohort *																				
No.	Administrative territories	Total number of cases of them, transferred to Cat. 4			Effective treatment				Died		Treatment failure			Treatment interruption		Transferred out/referred				
		Total		% of them, transferred to Cat. 4	Cured		Treatment completed		abs.	%	abs.	%	S+		CI-Rö		abs.	%	abs.	%
		abs.	%		abs.	%	abs.	%					abs.	%	abs.	%				
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vynnytska	202	83	41,1	22	18,5	66	55,5	13	10,9	11	9,2	2	1,7	5	4,2	0	0,0	0	0,0
3	Volynska	203	97	47,8	21	19,8	51	48,1	16	15,1	5	4,7	2	1,9	10	9,4	1	0,9	1	0,9
4	Dnipropetrovska	579	243	42,0	67	19,9	139	41,4	54	16,1	30	8,9	11	3,3	34	10,1	1	0,3	1	0,3
5	Donetska	259	100	38,6	48	30,2	46	28,9	30	18,9	18	11,3	5	3,1	12	7,5	0	0,0	0	0,0
6	Zhytomyrska	233	101	43,3	39	29,5	34	25,8	21	15,9	24	18,2	0	0,0	14	10,6	0	0,0	0	0,0
7	Zakarpatska	92	53	57,6	24	61,5	3	7,7	6	15,4	3	7,7	0	0,0	3	7,7	0	0,0	0	0,0
8	Zaporizka	237	112	47,3	19	15,2	76	60,8	12	9,6	12	9,6	2	1,6	4	3,2	0	0,0	0	0,0
9	Ivano-Frankivska	232	57	24,6	43	24,6	77	44,0	17	9,7	12	6,9	11	6,3	15	8,6	0	0,0	0	0,0
10	Kyvska	221	95	43,0	18	14,3	62	49,2	15	11,9	15	11,9	5	4,0	11	8,7	0	0,0	0	0,0
11	Kirovohradska	146	72	49,3	14	18,9	40	54,1	13	17,6	5	6,8	0	0,0	2	2,7	0	0,0	0	0,0
12	Luhanska	70	24	34,3	4	8,7	21	45,7	7	15,2	4	8,7	1	2,2	7	15,2	2	4,3	0	0,0
13	Lvvska	470	136	28,9	46	13,8	151	45,2	53	15,9	38	11,4	2	0,6	44	13,2	0	0,0	0	0,0
14	Mykolajvska	187	91	48,7	15	15,6	55	57,3	17	17,7	4	4,2	3	3,1	2	2,1	0	0,0	0	0,0
15	Odeska	460	223	48,5	80	33,8	69	29,1	45	19,0	15	6,3	2	0,8	26	11,0	0	0,0	0	0,0
16	Pollavska	256	115	44,9	50	35,5	43	30,5	21	14,9	11	7,8	3	2,1	13	9,2	0	0,0	0	0,0
17	Rivnenska	160	52	32,5	30	27,8	55	50,9	8	7,4	7	6,5	0	0,0	8	7,4	0	0,0	0	0,0
18	Sumska	184	77	41,8	40	37,4	31	29,0	14	13,1	16	15,0	0	0,0	4	3,7	2	1,9	0	0,0
19	Ternopil'ska	120	44	36,7	8	10,5	46	60,5	14	18,4	2	2,6	0	0,0	5	6,6	1	1,3	0	0,0
20	Khar'kvska	219	125	57,1	27	28,7	33	35,1	16	17,0	9	9,6	1	1,1	8	8,5	0	0,0	0	0,0
21	Kherson'ska	219	108	49,3	20	18,0	57	51,4	16	14,4	3	2,7	6	5,4	9	8,1	0	0,0	0	0,0
22	Khmel'nytska	208	80	38,5	39	30,5	41	32,0	21	16,4	9	7,0	12	9,4	6	4,7	0	0,0	0	0,0
23	Cherkaska	174	90	51,7	22	26,2	29	34,5	16	19,0	6	7,1	1	1,2	10	11,9	0	0,0	0	0,0
24	Chernivetska	125	36	28,8	30	33,7	36	40,4	10	11,2	4	4,5	1	1,1	8	9,0	0	0,0	0	0,0
25	Chernihiv'ska	219	87	39,7	19	14,4	63	47,7	27	20,5	9	6,8	5	3,8	9	6,8	0	0,0	0	0,0
26	Kyiv City	205	78	38,0	25	19,7	57	44,9	22	17,3	7	5,5	4	3,1	12	9,4	0	0,0	0	0,0
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		5680	2379	41,9	770	23,3	1381	41,8	504	15,3	279	8,5	79	2,4	281	8,5	7	0,2	40	12,0
State Penitentiary Service of Ukraine		502	170	33,9	32	9,6	173	52,1	4	1,2	19	5,7	26	7,8	38	11,4	0	0,0	0	0,0
Ministry of Defense of Ukraine		20	0	0,0	4	20,0	16	80,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
Ukraine		6202	2549	41,1	806	22,1	1570	43,0	508	13,9	298	8,2	105	2,9	319	8,7	47	1,3		

* The data are used from the reporting form No. 8-1 "Report on Treatment Outcomes for Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, TB 08" (quarterly)

Table 51

Treatment outcomes of pulmonary TB new cases with positive smear microscopy tests for AFB, 2015 cohort *																			
No.	Administrative territories	Total number of cases			Effective treatment				Died			Treatment failure			Treatment interruption		Transferred out/referred		
		of them, transferred to Cat. 4		%	Cured		Treatment completed		%	abs.	%	S+		CI-Rö		abs.	%	abs.	%
		abs.	%		abs.	%	abs.	%				abs.	%	abs.	%				
1	AR Crimea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Vinnyska	75	17	22,7	18	31,0	28	48,3	4	6,9	0	0,0	0	0,0	8	13,8	0	0,0	0,0
3	Volynska	82	29	35,4	5	9,4	20	37,7	7	13,2	3	5,7	0	0,0	18	34,0	0	0,0	0,0
4	Dnipropetrovska	908	286	31,5	131	21,1	180	28,9	133	21,4	58	9,3	13	2,1	104	16,7	3	0,5	0,5
5	Donetska	283	120	42,4	54	33,1	29	17,8	32	19,6	22	13,5	4	2,5	22	13,5	0	0,0	0,0
6	Zhytomyrska	131	41	31,3	44	48,9	16	17,8	2	2,2	17	18,9	1	1,1	10	11,1	0	0,0	0,0
7	Zakarpatska	276	121	43,8	65	41,9	22	14,2	4	2,6	10	6,5	2	1,3	52	33,5	0	0,0	0,0
8	Zaporizka	218	61	28,0	30	19,1	53	33,8	20	12,7	13	8,3	4	2,5	37	23,6	0	0,0	0,0
9	Ivano-Frankivska	202	28	13,9	62	35,6	55	31,6	13	7,5	9	5,2	11	6,3	24	13,8	0	0,0	0,0
10	Kyivska	201	60	29,9	20	14,2	53	37,6	17	12,1	10	7,1	4	2,8	37	26,2	0	0,0	0,0
11	Kirovohradska	159	58	36,5	14	13,9	42	41,6	24	23,8	9	8,9	1	1,0	11	10,9	0	0,0	0,0
12	Luhanska	81	32	39,5	0	0,0	22	44,9	7	14,3	3	6,1	1	2,0	11	22,4	5	10,2	10,2
13	Lvivska	257	53	20,6	38	18,6	72	35,3	30	14,7	15	7,4	4	2,0	41	20,1	4	2,0	2,0
14	Mykolajivska	364	161	44,2	34	16,7	86	42,4	49	24,1	3	1,5	7	3,4	20	9,9	4	2,0	2,0
15	Odeska	325	77	23,7	100	40,3	36	14,5	46	18,5	18	7,3	5	2,0	43	17,3	0	0,0	0,0
16	Poltavska	114	39	34,2	31	41,3	18	24,0	8	10,7	2	2,7	1	1,3	15	20,0	0	0,0	0,0
17	Rivnenska	44	2	4,5	18	42,9	15	35,7	3	7,1	4	9,5	0	0,0	2	4,8	0	0,0	0,0
18	Sumska	167	36	21,6	64	48,9	29	22,1	10	7,6	20	15,3	1	0,8	7	5,3	0	0,0	0,0
19	Ternopil'ska	16	5	31,3	2	18,2	3	27,3	2	18,2	3	27,3	0	0,0	1	9,1	0	0,0	0,0
20	Kharkivska	161	52	32,3	43	39,4	25	22,9	18	16,5	12	11,0	1	0,9	10	9,2	0	0,0	0,0
21	Khersonska	144	43	29,9	17	16,8	41	40,6	14	13,9	8	7,9	3	3,0	18	17,8	0	0,0	0,0
22	Khmelnytska	126	24	19,0	24	23,5	29	28,4	12	11,8	10	9,8	16	15,7	11	10,8	0	0,0	0,0
23	Cherkaska	104	25	24,0	26	32,9	22	27,8	9	11,4	9	11,4	0	0,0	13	16,5	0	0,0	0,0
24	Chernivetska	57	10	17,5	10	21,3	21	44,7	7	14,9	2	4,3	0	0,0	6	12,8	1	2,1	2,1
25	Chernihivska	59	9	15,3	12	24,0	20	40,0	2	4,0	5	10,0	2	4,0	9	18,0	0	0,0	0,0
26	Kyiv City	234	46	19,7	33	17,6	69	36,7	37	19,7	19	10,1	2	1,1	28	14,9	0	0,0	0,0
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		4788	1435	30,0	895	26,7	1006	30,0	510	15,2	284	8,5	83	2,5	558	16,6	17	0,5	0,5
State Penitentiary Service of Ukraine		203	42	20,7	11	6,8	81	50,3	4	2,5	8	5,0	24	14,9	14	8,7	19	11,8	11,8
Ministry of Defense of Ukraine		0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0
Ukraine		4991	1477	29,6	906	25,8	1087	30,9	514	14,6	292	8,3	107	3,0	572	16,3	36	1,0	1,0

* The data are used from the reporting form No. 8-1 "Report on Treatment Outcomes for Patients with Pulmonary Tuberculosis Recorded 12-15 Months Ago, TB 08" (quarterly)

Table 52

No.	Administrative territories	Total number of cases	Treatment outcomes of all MDR-TB cases, 2014 cohort *											
			Cured		Treatment completed		Died		Treatment failure		Treatment interruption		Transferred out/referred	
			abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	Vynnytska	194	45	23,2	50	25,8	35	18,0	45	23,2	17	8,8	2	1,0
2	Volynska	196	36	18,4	41	20,9	27	13,8	57	29,1	35	17,9	0	0,0
3	Dnipropetrovska	984	426	43,3	68	6,9	173	17,6	138	14,0	171	17,4	8	0,8
4	Donetska	350	137	39,1	10	2,9	47	13,4	49	14,0	101	28,9	6	1,7
5	Zhytomyrska	181	66	36,5	6	3,3	39	21,5	57	31,5	13	7,2	0	0,0
6	Zakarpatska	284	107	37,7	1	0,4	44	15,5	85	29,9	47	16,5	0	0,0
7	Zaporizka	365	97	26,6	83	22,7	58	15,9	62	17,0	59	16,2	6	1,6
8	Ivano-Frankivska	162	58	35,8	4	2,5	39	24,1	14	8,6	47	29,0	0	0,0
9	Kyivska	272	65	23,9	56	20,6	57	21,0	35	12,9	51	18,8	8	2,9
10	Kirovohradska	200	76	38,0	34	17,0	27	13,5	39	19,5	24	12,0	0	0,0
11	Luhanska	82	18	22,0	14	17,1	19	23,2	9	11,0	14	17,1	8	9,8
12	Lvivska	213	41	19,2	38	17,8	52	24,4	46	21,6	32	15,0	4	1,9
13	Mykolajivska	300	136	45,3	42	14,0	42	14,0	59	19,7	20	6,7	1	0,3
14	Odeska	602	295	49,0	1	0,2	129	21,4	71	11,8	101	16,8	5	0,8
15	Poltavska	261	109	41,8	1	0,4	50	19,2	63	24,1	34	13,0	4	1,5
16	Rivnenska	131	47	35,9	20	15,3	14	10,7	30	22,9	14	10,7	6	4,6
17	Sumska	153	60	39,2	13	8,5	25	16,3	25	16,3	28	18,3	2	1,3
18	Terнопilska	104	31	29,8	24	23,1	12	11,5	31	29,8	3	2,9	3	2,9
19	Kharkivska	328	138	42,1	48	14,6	52	15,9	38	11,6	51	15,5	1	0,3
20	Khersonska	309	124	40,1	58	18,8	44	14,2	47	15,2	35	11,3	1	0,3
21	Khmelnyvska	175	74	42,3	3	1,7	48	27,4	35	20,0	13	7,4	2	1,1
22	Cherkaska	141	54	38,3	15	10,6	39	27,7	16	11,3	14	9,9	3	2,1
23	Chernivetska	73	24	32,9	10	13,7	15	20,5	11	15,1	11	15,1	2	2,7
24	Chernihivska	242	65	26,9	35	14,5	36	14,9	65	26,9	41	16,9	0	0,0
25	Kyiv City	316	46	14,6	59	18,7	66	20,9	46	14,6	92	29,1	7	2,2
26	State Penitentiary Service of Ukraine	550	113	20,5	69	12,5	21	3,8	111	20,2	118	21,5	118	21,5
27	Ministry of Defense of Ukraine	6	6	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
	Ukraine	7174	2494	34,8	803	11,2	1210	16,9	1284	17,9	1186	16,5	197	2,7

* The data are used from the reporting form "Report on the Final Treatment Outcomes of Confirmed MDR-TB Cases That Started Treatment 20 (24) Months Ago, TB 08 - MDR-TB"

Table 53

No.	Administrative territories	Total number of cases	Treatment outcomes of pulmonary MDR-TB new cases, 2014 cohort *											
			Cured		Treatment completed		Died		Treatment failure		Treatment interruption		Transferred out/referred	
			abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	Vynnytska	86	25	29,1	16	18,6	5	5,8	12	14,0	7	8,1	1	1,2
2	Volynska	57	15	26,3	17	29,8	5	8,8	9	15,8	11	19,3	0	0,0
3	Dnipropetrovska	371	191	51,5	34	9,2	62	16,7	20	5,4	61	16,4	3	0,8
4	Donevska	172	71	41,3	5	2,9	25	14,5	20	11,6	46	26,7	5	2,9
5	Zhytomyrska	56	23	41,1	2	3,6	15	26,8	13	23,2	3	5,4	0	0,0
6	Zakarpatska	71	41	57,7	0	0,0	11	15,5	11	15,5	8	11,3	0	0,0
7	Zaporizka	160	48	30,0	41	25,6	19	11,9	22	13,8	26	16,3	4	2,5
8	Ivano-Frankivska	48	25	52,1	1	2,1	8	16,7	2	4,2	12	25,0	0	0,0
9	Kyivska	99	32	32,3	27	27,3	18	18,2	10	10,1	10	10,1	2	2,0
10	Kirovohradska	78	38	48,7	10	12,8	13	16,7	7	9,0	10	12,8	0	0,0
11	Luhanska	34	9	26,5	5	14,7	9	26,5	2	5,9	7	20,6	2	5,9
12	Lvivska	64	15	23,4	21	32,8	12	18,8	9	14,1	7	10,9	0	0,0
13	Mykolajivska	86	37	43,0	11	12,8	17	19,8	13	15,1	8	9,3	0	0,0
14	Odeska	320	170	53,1	0	0,0	55	17,2	38	11,9	54	16,9	3	0,9
15	Pollavska	84	49	58,3	0	0,0	10	11,9	10	11,9	14	16,7	1	1,2
16	Rivnenska	44	18	40,9	4	9,1	5	11,4	10	22,7	6	13,6	1	2,3
17	Sumska	45	25	55,6	2	4,4	3	6,7	2	4,4	12	26,7	1	2,2
18	Terнопilska	43	20	46,5	13	30,2	1	2,3	8	18,6	1	2,3	0	0,0
19	Kharkivska	149	72	48,3	26	17,4	18	12,1	11	7,4	22	14,8	0	0,0
20	Khersonska	144	71	49,3	27	18,8	19	13,2	15	10,4	11	7,6	1	0,7
21	Khmelnytska	63	32	50,8	2	3,2	10	15,9	11	17,5	8	12,7	0	0,0
22	Cherkaska	52	19	36,5	6	11,5	10	19,2	11	21,2	3	5,8	3	5,8
23	Chernivetska	26	13	50,0	2	7,7	4	15,4	2	7,7	3	11,5	2	7,7
24	Chernihivska	85	35	41,2	14	16,5	8	9,4	16	18,8	12	14,1	0	0,0
25	Kyiv City	107	25	23,4	20	18,7	24	22,4	12	11,2	23	21,5	3	2,8
26	State Penitentiary Service of Ukraine	96	27	28,1	11	11,5	7	7,3	13	13,5	20	20,8	18	18,8
27	Ministry of Defense of Ukraine	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
	Ukraine	2642	1148	43,5	326	12,3	404	15,3	309	11,7	405	15,3	50	1,9

* The data are used from the reporting form "Report on the Final Treatment Outcomes of Confirmed MDR-TB Cases That Started Treatment 20 (24) Months Ago, TB 08 - MDR-TB"

Table 54

No.	Administrative territories	Treatment outcomes of pulmonary MDR-TB relapses, 2014 cohort (relapses and other re-treatment cases) *													
		Total number of cases		Cured		Treatment completed		Died		Treatment failure		Treatment interruption		Transferred out/referred	
		abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	Vynnytska	108	20	18,5	25	23,1	19	17,6	33	30,6	10	9,3	1	0,9	
2	Volynska	138	21	15,2	23	16,7	22	15,9	48	34,8	24	17,4	0	0,0	
3	Dnipropetrovska	595	225	37,8	34	5,7	105	17,6	117	19,7	109	18,3	5	0,8	
4	Donetska	173	64	37,0	4	2,3	21	12,1	28	16,2	55	31,8	1	0,6	
5	Zhytomyrska	121	41	33,9	4	3,3	23	19,0	43	35,5	10	8,3	0	0,0	
6	Zakarpatska	213	66	31,0	1	0,5	33	15,5	74	34,7	39	18,3	0	0,0	
7	Zaporizka	201	49	24,4	40	19,9	37	18,4	40	19,9	33	16,4	2	1,0	
8	Ivano-Frankivska	114	33	28,9	3	2,6	31	27,2	12	10,5	35	30,7	0	0,0	
9	Kyivska	166	33	19,9	25	15,1	37	22,3	24	14,5	41	24,7	6	3,6	
10	Kirovohradska	122	38	31,1	24	19,7	14	11,5	32	26,2	14	11,5	0	0,0	
11	Luhanska	47	9	19,1	8	17,0	10	21,3	7	14,9	7	14,9	6	12,8	
12	Lvivska	149	26	17,4	17	11,4	40	26,8	37	24,8	25	16,8	4	2,7	
13	Mykolajivska	214	99	46,3	31	14,5	25	11,7	46	21,5	12	5,6	1	0,5	
14	Odeska	266	119	44,7	0	0,0	70	26,3	30	11,3	45	16,9	2	0,8	
15	Poltavska	177	60	33,9	1	0,6	40	22,6	53	29,9	20	11,3	3	1,7	
16	Rivnenska	79	26	32,9	13	16,5	9	11,4	20	25,3	8	10,1	3	3,8	
17	Sumska	107	34	31,8	11	10,3	22	20,6	23	21,5	16	15,0	1	0,9	
18	Ternopilska	60	11	18,3	10	16,7	11	18,3	23	38,3	2	3,3	3	5,0	
19	Kharkivska	171	62	36,3	21	12,3	32	18,7	26	15,2	29	17,0	1	0,6	
20	Khersonska	158	50	31,6	30	19,0	24	15,2	31	19,6	23	14,6	0	0,0	
21	Khmelnyvska	111	42	37,8	1	0,9	37	33,3	24	21,6	5	4,5	2	1,8	
22	Cherkaska	86	35	40,7	8	9,3	29	33,7	4	4,7	10	11,6	0	0,0	
23	Chernivetska	46	11	23,9	8	17,4	11	23,9	8	17,4	8	17,4	0	0,0	
24	Chernihivska	155	29	18,7	21	13,5	28	18,1	49	31,6	28	18,1	0	0,0	
25	Kyiv City	204	21	10,3	36	17,6	42	20,6	34	16,7	67	32,8	4	2,0	
26	State Penitentiary Service of Ukraine	444	85	19,1	58	13,1	13	2,9	97	21,8	99	22,3	92	20,7	
27	Ministry of Defense of Ukraine	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	
	Ukraine	4429	1313	29,6	457	10,3	785	17,7	963	21,7	774	17,5	137	3,1	

* The data are used from the reporting form "Report on the Final Treatment Outcomes of Confirmed MDR-TB Cases That Started Treatment 20 (24) Months Ago, TB 08 - MDR-TB"

Table 55

Treatment outcomes of all XDR-TB cases, 2014 cohort *														
No.	Administrative territories	Total number of cases	Cured		Treatment completed		Died		Treatment failure		Treatment interruption		Transferred out/referred	
			abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	Vynnytska	52	6	11,5	5	9,6	6	11,5	28	53,8	6	11,5	1	1,9
2	Volynska	40	1	2,5	1	2,5	10	25,0	21	52,5	7	17,5	0	0,0
3	Dnipropetrovska	78	20	25,6	7	9,0	25	32,1	17	21,8	8	10,3	1	1,3
4	Donevska	10	3	30,0	1	10,0	2	20,0	2	20,0	2	20,0	0	0,0
5	Zhytomyrska	23	8	34,8	1	4,3	6	26,1	6	26,1	2	8,7	0	0,0
6	Zakarpatska	35	9	25,7	0	0,0	8	22,9	15	42,9	2	5,7	1	2,9
7	Zaporizka	89	8	9,0	10	11,2	18	20,2	31	34,8	22	24,7	0	0,0
8	Ivano-Frankivska	52	5	9,6	3	5,8	16	30,8	6	11,5	22	42,3	0	0,0
9	Kyivska	18	3	16,7	3	16,7	6	33,3	2	11,1	3	16,7	1	5,6
10	Kirovohradska	4	0	0,0	0	0,0	2	50,0	1	25,0	1	25,0	0	0,0
11	Luhanska	4	0	0,0	1	25,0	1	25,0	2	50,0	0	0,0	0	0,0
12	Lvivska	89	16	18,0	18	20,2	31	34,8	18	20,2	6	6,7	0	0,0
13	Mykolajivska	13	6	46,2	2	15,4	0	0,0	4	30,8	1	7,7	0	0,0
14	Odeska	58	13	22,4	0	0,0	26	44,8	16	27,6	2	3,4	1	1,7
15	Poltavska	37	10	27,0	0	0,0	16	43,2	7	18,9	3	8,1	1	2,7
16	Rivnenska	13	7	53,8	1	7,7	1	7,7	4	30,8	0	0,0	0	0,0
17	Sumska	7	2	28,6	0	0,0	4	57,1	1	14,3	0	0,0	0	0,0
18	Terнопil'ska	28	3	10,7	4	14,3	6	21,4	12	42,9	3	10,7	0	0,0
19	Kharkivska	52	11	21,2	2	3,8	12	23,1	15	28,8	12	23,1	0	0,0
20	Khersonska	75	15	20,0	9	12,0	13	17,3	27	36,0	11	14,7	0	0,0
21	Khmelnytska	46	3	6,5	2	4,3	21	45,7	18	39,1	0	0,0	2	4,3
22	Cherkaska	27	7	25,9	2	7,4	9	33,3	7	25,9	1	3,7	1	3,7
23	Chernivetska	9	3	33,3	0	0,0	3	33,3	3	33,3	0	0,0	0	0,0
24	Chernihivska	63	9	14,3	2	3,2	18	28,6	23	36,5	11	17,5	0	0,0
25	Kyiv City	66	10	15,2	10	15,2	16	24,2	19	28,8	11	16,7	0	0,0
26	State Penitentiary Service of Ukraine	109	10	9,2	6	5,5	9	8,3	25	22,9	31	28,4	28	25,7
27	Ministry of Defense of Ukraine	0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
Ukraine		1097	188	17,1	90	8,2	285	26,0	330	30,1	167	15,2	37	3,4

* The data are used from the reporting form "Report on the Final Treatment Outcomes of Confirmed MDR-TB Cases That Started Treatment 20 (24) Months Ago, TB 08 - MDR-TB"

Table 56

No.	Administrative territories	Total number of cases	Treatment outcomes of pulmonary XDR-TB new cases, 2014 cohort *															
			Cured		Treatment completed		Died		Treatment failure		Treatment interruption		Transferred out/referred					
			abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%				
1	Vynnytska	5	3	60,0	0	0,0	0	0,0	2	40,0	0	0,0	0	0,0	0	0,0		
2	Volynska	7	1	14,3	0	0,0	0	0,0	3	42,9	3	42,9	0	0,0	0	0,0		
3	Dnipropetrovska	13	6	46,2	3	23,1	2	15,4	2	15,4	0	0,0	0	0,0	0	0,0		
4	Donetska	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
5	Zhytomyrska	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
6	Zakarpatska	1	1	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
7	Zaporizka	14	2	14,3	4	28,6	1	7,1	5	35,7	2	14,3	0	0,0	0	0,0		
8	Ivano-Frankivska	4	0	0,0	0	0,0	1	25,0	2	50,0	1	25,0	0	0,0	0	0,0		
9	Kyivska	3	2	66,7	0	0,0	0	0,0	1	33,3	0	0,0	0	0,0	0	0,0		
10	Kirovohradska	1	0	0,0	0	0,0	1	100,0	0	0,0	0	0,0	0	0,0	0	0,0		
11	Luhanska	0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
12	Lvvska	16	2	12,5	4	25,0	9	56,3	1	6,3	0	0,0	0	0,0	0	0,0		
13	Mykolajvska	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0	0,0	0	0,0		
14	Odeska	15	7	46,7	0	0,0	4	26,7	3	20,0	1	6,7	0	0,0	0	0,0		
15	Poltavska	1	1	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
16	Rivnenska	0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
17	Sumska	1	0	0,0	0	0,0	1	100,0	0	0,0	0	0,0	0	0,0	0	0,0		
18	Ternopil'ska	8	2	25,0	1	12,5	0	0,0	4	50,0	1	12,5	0	0,0	0	0,0		
19	Kharkivska	17	5	29,4	1	5,9	5	29,4	3	17,6	3	17,6	0	0,0	0	0,0		
20	Khersonska	18	4	22,2	4	22,2	1	5,6	6	33,3	3	16,7	0	0,0	0	0,0		
21	Khmelnytska	2	0	0,0	0	0,0	0	0,0	1	50,0	0	0,0	1	50,0	0	0,0		
22	Cherkaska	8	2	25,0	0	0,0	3	37,5	3	37,5	0	0,0	0	0,0	0	0,0		
23	Chernivetska	4	3	75,0	0	0,0	0	0,0	1	25,0	0	0,0	0	0,0	0	0,0		
24	Chernihivska	12	4	33,3	0	0,0	3	25,0	3	25,0	2	16,7	0	0,0	0	0,0		
25	Kyiv City	8	3	37,5	1	12,5	2	25,0	0	0,0	2	25,0	0	0,0	0	0,0		
26	State Penitentiary Service of Ukraine	15	4	26,7	1	6,7	0	0,0	2	13,3	4	26,7	4	26,7	0	0,0		
27	Ministry of Defense of Ukraine	0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0		
	Ukraine	181	59	32,6	19	10,5	33	18,2	43	23,8	22	12,2	5	2,8	5	2,8		

* The data are used from the reporting form "Report on the Final Treatment Outcomes of Confirmed MDR-TB Cases That Started Treatment 20 (24) Months Ago, TB 08 - MDR-TB"

Table 57

Treatment outcomes of pulmonary XDR-TB relapses, 2014 cohort (relapses and other re-treatment cases) *														
No.	Administrative territories	Total number of cases	Cured		Treatment completed		Died		Treatment failure		Treatment interruption		Transferred out/retreated	
			abs.	%	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
1	Vynnytska	47	3	6,4	5	10,6	6	12,8	26	55,3	6	12,8	1	2,1
2	Volynska	32	0	0,0	1	3,1	10	31,3	17	53,1	4	12,5	0	0,0
3	Dnipropetrovska	60	12	20,0	4	6,7	22	36,7	15	25,0	6	10,0	1	1,7
4	Donetska	8	1	12,5	1	12,5	2	25,0	2	25,0	2	25,0	0	0,0
5	Zhytomyrska	19	4	21,1	1	5,3	6	31,6	6	31,6	2	10,5	0	0,0
6	Zakarpatska	33	8	24,2	0	0,0	8	24,2	14	42,4	2	6,1	1	3,0
7	Zaporizka	75	6	8,0	6	8,0	17	22,7	26	34,7	20	26,7	0	0,0
8	Ivano-Frankivska	48	5	10,4	3	6,3	15	31,3	4	8,3	21	43,8	0	0,0
9	Kyivska	14	1	7,1	2	14,3	6	42,9	1	7,1	3	21,4	1	7,1
10	Kirovohradska	3	0	0,0	0	0,0	1	33,3	1	33,3	1	33,3	0	0,0
11	Luhanska	4	0	0,0	1	25,0	1	25,0	2	50,0	0	0,0	0	0,0
12	Lvivska	73	14	19,2	14	19,2	22	30,1	17	23,3	6	8,2	0	0,0
13	Mykolajivska	11	5	45,5	2	18,2	0	0,0	3	27,3	1	9,1	0	0,0
14	Odeska	41	5	12,2	0	0,0	21	51,2	13	31,7	1	2,4	1	2,4
15	Poltavska	36	9	25,0	0	0,0	16	44,4	7	19,4	3	8,3	1	2,8
16	Rivnenska	13	7	53,8	1	7,7	1	7,7	4	30,8	0	0,0	0	0,0
17	Sumska	6	2	33,3	0	0,0	3	50,0	1	16,7	0	0,0	0	0,0
18	Terнопil'ska	20	1	5,0	3	15,0	6	30,0	8	40,0	2	10,0	0	0,0
19	Kharkivska	35	6	17,1	1	2,9	7	20,0	12	34,3	9	25,7	0	0,0
20	Cherson'ska	56	10	17,9	5	8,9	12	21,4	21	37,5	8	14,3	0	0,0
21	Khimelnytska	44	3	6,8	2	4,5	21	47,7	17	38,6	0	0,0	1	2,3
22	Cherkaska	19	5	26,3	2	10,5	6	31,6	4	21,1	1	5,3	1	5,3
23	Chernihivetska	5	0	0,0	0	0,0	3	60,0	2	40,0	0	0,0	0	0,0
24	Chernihivska	48	4	8,3	2	4,2	15	31,3	18	37,5	9	18,8	0	0,0
25	Kyiv City	58	7	12,1	9	15,5	14	24,1	19	32,8	9	15,5	0	0,0
26	State Penitentiary Service of Ukraine	94	6	6,4	5	5,3	9	9,6	23	24,5	27	28,7	24	25,5
27	Ministry of Defense of Ukraine	0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
Ukraine		902	124	13,7	70	7,8	250	27,7	283	31,4	143	15,9	32	3,5

* The data are used from the reporting form "Report on the Final Treatment Outcomes of Confirmed MDR-TB Cases That Started Treatment 20 (24) Months Ago, TB 08 - MDR-TB"

Table 58

Surgical treatment of TB cases in health care facilities of the MOH of Ukraine system *											
No.	Administrative territories	Patients undergone pulmonary TB surgery				Patients undergone extrapulmonary TB surgery					
		Absolute number		% of the number of patients with pulmonary TB (newly detected in the reporting year + cohort by the end of last year)		Absolute number		% of the number of patients with extrapulmonary TB (newly detected in the reporting year + cohort by the end of last year)			
		2015	2016	2015	2016	2015	2016	2015	2016		
1	AR Crimea	-	0	-	0	-	0	-	0	-	0
2	Vynnytska	25	39	1,4	2,3	43	23	29,7	14,7	29,7	14,7
3	Volyńska	39	63	2,8	4,8	80	38	33,9	20	33,9	20
4	Dnipropetrovska	184	195	3,2	3,6	25	34	3,5	5,6	3,5	5,6
5	Donetska	11	21	0,2	0,8	21	12	7,5	11,3	7,5	11,3
6	Zhytomyrska	41	17	2,2	0,9	31	4	13,5	1,8	13,5	1,8
7	Zakarpatska	24	11	1,1	0,5	6	10	7,5	12,8	7,5	12,8
8	Zaporizka	59	65	2,2	2,4	16	16	7,3	7,1	7,3	7,1
9	Ivano-Frankivska	29	45	1,8	3	60	35	46,2	26,7	46,2	26,7
10	Kyivska	26	29	1	1	30	41	9,2	9,8	9,2	9,8
11	Kirovohradska	21	12	1,2	0,7	2	13	3,1	20	3,1	20
12	Luhanska	1	2	0,1	0,2	3	0	3,8	0	3,8	0
13	Lvivska	60	41	1,9	1,4	7	13	2,7	5,4	2,7	5,4
14	Mykolajivska	80	65	3,7	3	25	31	18,8	23,8	18,8	23,8
15	Odeska	85	193	1,8	3,6	175	177	43,1	38,7	43,1	38,7
16	Poltavska	46	11	2,3	0,5	21	15	24,4	16	24,4	16
17	Rivnenska	11	7	0,8	0,5	1	1	0,5	0,6	0,5	0,6
18	Sumska	17	25	1,2	1,8	62	25	45,3	20	45,3	20
19	Terнопil'ska	32	72	3,3	7,5	49	32	43,4	31,4	43,4	31,4
20	Kharkivska	25	34	0,9	1,3	11	22	4,8	10,5	4,8	10,5
21	Khersonska	57	54	2,8	2,8	77	40	44,8	26,1	44,8	26,1
22	Khmelnytska	25	20	1,9	1,5	26	19	15,8	12,4	15,8	12,4
23	Cherkaska	58	26	4	1,9	4	18	1,5	6,6	1,5	6,6
24	Chernivetska	12	22	1,2	2,3	6	5	5,4	6,2	5,4	6,2
25	Chernihivska	5	8	0,3	0,5	18	13	17,1	11,5	17,1	11,5
26	Kyiv City	22	33	0,8	1,2	7	32	2,3	9,3	2,3	9,3
27	Sevastopol City	-	0	-	0	-	0	-	0	-	0
Ukraine		995	1 110	1,8	2,1	806	669	15,5	13,6	15,5	13,6

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 59

No.		Surgical treatment of extrapulmonary TB cases in health care facilities of the MOH of Ukraine system *											
		Administrative territories		% of the number of newly detected cases in the reporting year + cohort by the end of last year									
				Osteoarticular tuberculosis		Tuberculosis of urogenital system		Tuberculosis of peripheral lymph nodes					
				2015	2016	2015	2016	2015	2016				
1	AR Crimea	-	-	-	-	-	-	-	-	-	-		
2	Vynnytska	6,0	4,0	0,0	0,0	66,7	0,0	30,8	0,0	66,7	30,8		
3	Volynska	6,7	4,9	9,1	0,0	10,0	0,0	33,3	0,0	10,0	33,3		
4	Dnipropetrovska	3,3	0,0	1,3	41,0	26,8	41,0	39,0	41,0	26,8	39,0		
5	Donetska	24,1	12,9	11,1	0,0	23,5	0,0	14,3	0,0	23,5	14,3		
6	Zhytomyrska	6,0	2,6	10,0	9,1	36,8	9,1	0,0	0,0	36,8	0,0		
7	Zakarpatska	0,0	0,0	0,0	12,5	0,0	12,5	0,0	0,0	0,0	0,0		
8	Zaporizka	12,8	10,3	0,0	0,0	0,0	0,0	27,3	0,0	0,0	27,3		
9	Ivano-Frankivska	12,0	33,3	21,4	50,0	71,4	50,0	18,8	50,0	71,4	18,8		
10	Kyivska	10,3	10,4	11,1	9,1	4,5	9,1	6,7	9,1	4,5	6,7		
11	Kirovohradska	0,0	0,0	0,0	0,0	0,0	0,0	16,7	0,0	0,0	16,7		
12	Luhanska	0,0	0,0	14,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0		
13	Lvivska	0,0	0,0	0,0	0,0	0,0	0,0	7,7	0,0	0,0	7,7		
14	Mykolajivska	0,0	0,0	20,0	0,0	0,0	0,0	43,8	0,0	0,0	43,8		
15	Odeska	4,8	6,5	20,0	5,6	58,8	5,6	61,5	5,6	58,8	61,5		
16	Poltavska	0,0	6,5	25,0	0,0	0,0	0,0	42,9	0,0	0,0	42,9		
17	Rivnenska	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0		
18	Sumska	4,3	0,0	40,7	21,7	16,7	21,7	33,3	21,7	16,7	33,3		
19	Ternopilska	0,0	17,6	0,0	20,0	25,0	20,0	16,7	20,0	25,0	16,7		
20	Kharkivska	2,2	10,6	8,3	8,3	28,6	8,3	38,5	8,3	28,6	38,5		
21	Khersonska	4,5	1,5	100,0	57,1	41,7	57,1	10,0	57,1	41,7	10,0		
22	Khmelnytska	0,0	4,5	25,0	0,0	47,1	0,0	20,0	0,0	47,1	20,0		
23	Cherkaska	0,0	0,0	15,8	2,8	0,0	2,8	6,3	2,8	0,0	6,3		
24	Chernivetska	0,0	3,3	33,3	0,0	33,3	0,0	25,0	0,0	33,3	25,0		
25	Chernihivska	0,0	2,6	0,0	0,0	0,0	0,0	9,1	0,0	0,0	9,1		
26	Kyiv City	2,6	11,3	3,6	6,9	3,8	6,9	4,8	6,9	3,8	4,8		
27	Sevastopol City	-	-	-	-	-	-	-	-	-	-		
Ukraine		3,9	5,4	13,7	12,5	17,7	12,5	18,6	12,5	17,7	18,6		

* The data are used from the form No. 33-zdorov "Report on TB Patients"

Table 60

Indicators of primary disability due to TB among able-bodied population (according to the Medical and Social Expert Commission data) *												
No.	Administrative territories	Absolute number					Per 100,000 of the respective population					
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	
1	AR Crimea	359	313	-	-	-	3,2	2,8	-	-	-	-
2	Vynnytska	239	236	231	252	236	2,7	2,6	2,6	2,7	2,7	2,6
3	Volynska	131	129	123	120	108	2,2	2,2	2,1	2,0	2,0	1,8
4	Dnipropetrovska	409	429	470	446	427	2,1	2,3	2,5	2,3	2,3	2,2
5	Donetska	555	552	0	212	207	2,2	2,2	0,0	0,8	0,8	1,8
6	Zhytomyrska	185	190	173	169	167	2,6	2,7	2,5	2,3	2,3	2,3
7	Zakarpatska	230	223	202	157	154	3,2	3,1	2,8	2,1	2,1	2,1
8	Zaporizka	161	160	163	162	154	1,6	1,6	1,6	1,6	1,6	1,5
9	Ivano-Frankivska	147	146	123	130	124	1,9	1,8	1,6	1,6	1,6	1,5
10	Kyvska	171	176	193	256	270	1,7	1,8	2,0	2,5	2,5	2,6
11	Kirovohradska	242	178	163	166	196	4,4	3,3	3,0	3,0	3,0	3,5
12	Luhanska	485	562	6	62	102	3,7	4,3	0,0	0,5	0,5	2,4
13	Lvvska	580	457	437	466	457	4,0	3,1	3,0	3,1	3,1	3,0
14	Mykolajivska	183	175	172	163	164	2,7	2,6	2,6	2,4	2,4	2,4
15	Odeska	487	500	505	533	472	3,5	3,7	3,7	3,8	3,8	3,4
16	Poltavska	164	162	164	196	164	2,0	2,0	2,0	2,3	2,3	1,9
17	Rivnenska	204	136	58	71	97	3,1	2,1	0,9	1,1	1,1	1,4
18	Sumska	107	75	62	56	57	1,6	1,2	1,0	0,8	0,8	0,9
19	Teropilska	139	122	108	103	96	2,3	2,0	1,8	1,6	1,6	1,5
20	Kharkivska	174	162	96	95	120	1,1	1,0	0,6	0,6	0,6	0,7
21	Khersonska	355	320	313	340	347	5,7	5,2	5,2	5,4	5,4	5,5
22	Khmelnyvska	165	157	134	158	140	2,2	2,2	1,9	2,1	2,1	1,9
23	Cherkaska	84	82	76	78	68	1,2	1,2	1,1	1,1	1,1	0,9
24	Chernivetska	101	83	48	41	31	2,0	1,6	0,9	0,8	0,8	0,6
25	Chernihivska	157	151	148	118	127	2,6	2,6	2,6	2,0	2,0	2,1
26	Kyiv City	222	233	167	143	205	1,3	1,4	1,0	0,8	0,8	1,2
27	Sevastopol City	39	53	0	0	-	1,8	2,5	-	-	-	-
Ukraine		6475	6162	4335	4693	4690	2,5	2,4	0,0	1,9	1,9	2,0

* Reporting form No. 14 "Report on the Causes of Disability, Indications for Medical, Professional and Social Rehabilitation"

Table 61

Indicators of primary disability due to TB among children aged 0-17 years (according to the Medical Consultative Commission data) *													
No.	Administrative territories	Total of the children recognized as disabled						Including children that became newly disabled in the reporting year					
		Absolute number		Per 10,000 of the respective population		Absolute number		Per 10,000 of the respective population		Absolute number		Per 10,000 of the respective population	
		2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
1	AR Crimea	-	0	-	-	-	-	0	-	-	-	-	-
2	Vynnytska	24	26	0,8	0,9	4	3	0,10	0,10	3	0,10	0,10	0,10
3	Volynska	19	14	0,8	0,6	2	0	0,10	0,00	0	0,10	0,00	0,00
4	Dnipropetrovska	21	33	0,4	0,6	3	12	0,10	0,20	3	0,10	0,20	0,20
5	Donetska	14	12	0,4	0,4	2	2	0,10	0,10	2	0,10	0,10	0,10
6	Zhytomyrska	15	15	0,6	0,6	1	1	0,04	0,04	1	0,04	0,04	0,04
7	Zakarpatska	12	15	0,4	0,5	2	4	0,10	0,10	4	0,10	0,10	0,10
8	Zaporizka	19	20	0,7	0,7	2	3	0,07	0,10	3	0,07	0,10	0,10
9	Ivano-Frankivska	17	15	0,6	0,5	3	4	0,10	0,10	4	0,10	0,10	0,10
10	Kyvska	22	26	0,7	0,8	3	4	0,10	0,10	4	0,10	0,10	0,10
11	Kirovohradska	24	24	1,4	1,4	2	3	0,10	0,20	3	0,10	0,20	0,20
12	Luhanska	10	8	0,9	0,7	1	2	0,10	0,20	2	0,10	0,20	0,20
13	Lvvska	26	37	0,5	0,8	7	19	0,10	0,40	19	0,10	0,40	0,40
14	Mykolajivska	11	12	0,5	0,6	2	1	0,10	0,00	1	0,10	0,00	0,00
15	Odeska	12	20	0,3	0,4	2	2	0,04	0,04	2	0,04	0,04	0,04
16	Poltavska	17	13	0,7	0,6	2	1	0,10	0,04	1	0,10	0,04	0,04
17	Rivnenska	33	30	1,2	1,1	2	0	0,10	0,0	0	0,10	0,0	0,0
18	Sumska	34	34	1,9	2,0	2	2	0,10	0,1	2	0,10	0,1	0,1
19	Teropiliska	5	3	0,2	0,1	1	0	0,05	0,0	0	0,05	0,0	0,0
20	Kharkivska	10	14	0,2	0,3	3	2	0,10	0,05	2	0,10	0,05	0,05
21	Khersonska	14	13	0,7	0,7	4	4	0,20	0,20	4	0,20	0,20	0,20
22	Khmelnytska	26	26	1,1	1,1	7	4	0,30	0,20	4	0,30	0,20	0,20
23	Cherkaska	19	17	0,9	0,8	1	0	0,05	0,00	0	0,05	0,00	0,00
24	Chernivetska	9	8	0,5	0,4	1	0	0,10	0,00	0	0,10	0,00	0,00
25	Chernihivska	16	16	1	1,0	2	2	0,10	0,10	2	0,10	0,10	0,10
26	Kyiv City	41	39	0,8	0,8	3	1	0,10	0,02	1	0,10	0,02	0,02
27	Sevastopol City	-	0	-	-	-	0	-	-	0	-	-	-
	Ukraine	470	490	0,6	0,6	64	76	0,10	0,10	76	0,10	0,10	0,10

* Reporting form No. 19 "Report on Children with Disabilities Aged under 18 Living in the Area of Servicing of a Health Care Facility, Infant Orphanage or Boarding School"

Table 62

TB mortality (according to the data of the State Statistics Committee of Ukraine)													
No.	Administrative territories	Absolute number						Per 100,000 population					
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016		
1	AR Crimea	354	300	-	-	-	18,1	15,3	-	-	-	-	-
2	Vynnytska	139	167	112	135	118	8,5	10,3	7,0	8,4	8,4	7,4	
3	Volyvska	161	178	207	153	155	15,5	17,2	19,9	14,7	14,7	14,9	
4	Dnipropetrovska	731	646	557	567	518	22,0	19,5	16,9	17,3	17,3	15,9	
5	Donetska	862	796	657	316	244	19,6	18,2	15,2	16,1	16,1	12,4	
6	Zhytomyrska	146	162	153	151	134	11,5	12,8	12,1	12,0	12,0	10,7	
7	Zakarpatska	159	158	156	133	131	12,7	12,6	12,4	10,6	10,6	10,4	
8	Zaporizka	301	278	285	261	242	16,8	15,6	16,1	14,8	14,8	13,8	
9	Ivano-Frankivska	148	153	142	118	86	10,7	11,1	10,3	8,6	8,6	6,2	
10	Kyvska	277	254	192	202	157	16,2	14,8	11,2	11,7	11,7	9,1	
11	Kirovohradska	191	150	160	154	99	19,2	15,2	16,3	15,8	15,8	10,2	
12	Luhanska	484	465	240	130	127	21,3	20,6	10,7	18,1	18,1	17,8	
13	Lvvska	369	359	352	313	260	14,6	14,2	14,0	12,4	12,4	10,3	
14	Mykolajivska	154	144	133	114	92	13,1	12,3	11,4	9,8	9,8	7,9	
15	Odeska	422	378	265	272	316	17,8	15,9	11,1	11,4	11,4	13,3	
16	Poltavska	214	212	161	166	143	14,6	14,5	11,1	11,5	11,5	10,0	
17	Rivnenska	128	131	97	90	100	11,1	11,3	8,4	7,8	7,8	8,6	
18	Sumska	176	164	142	150	116	15,3	14,4	12,6	13,4	13,4	10,4	
19	Ternopilvska	81	68	88	74	64	7,5	6,3	8,2	6,9	6,9	6,0	
20	Kharkivska	369	337	285	322	256	13,5	12,4	10,5	11,9	11,9	9,5	
21	Khersonska	216	185	172	198	156	20,0	17,2	16,1	18,6	18,6	14,7	
22	Khmelnyvska	117	99	114	100	96	8,9	7,6	8,7	7,7	7,7	7,4	
23	Cherkaska	134	127	141	128	113	10,5	10	11,2	10,3	10,3	9,1	
24	Chernivetska	91	93	76	69	70	10,1	10,3	8,4	7,6	7,6	7,7	
25	Chernihivska	142	132	141	120	104	13,1	12,3	13,3	11,5	11,5	10,0	
26	Kyiv City	244	207	212	166	167	8,8	7,4	7,5	5,8	5,8	5,8	
27	Sevastopol City	52	47	-	-	-	13,7	12,3	-	-	-	-	
Ukraine		6862	6390	5240	4602	4 064	15,1	14,1	12,2	10,8	10,8	9,5	

Table 63

Patients aged 0-17 years died of TB (according to the data of the State Statistics Committee of Ukraine)						
No.	Administrative territories	Absolute number				
		2012	2013	2014	2015	2016
1	AR Crimea	1	0	-	-	0
2	Vynnytska	0	1	0	0	0
3	Volyńska	0	1	0	3	0
4	Dnipropetrovska	0	1	1	1	2
5	Donetska	1	1	1	0	0
6	Zhytomyrska	1	1	0	2	0
7	Zakarpatska	0	0	0	0	0
8	Zaporizka	1	1	0	0	0
9	Ivano-Frankivska	0	0	0	1	0
10	Kyivska	1	2	0	1	0
11	Kirovohradska	0	0	0	0	0
12	Luhanska	1	0	0	1	0
13	Lvivska	1	2	1	2	2
14	Mykolajivska	0	0	0	0	0
15	Odeska	1	0	0	0	2
16	Poltavska	0	0	0	0	0
17	Rivnenska	0	0	0	0	2
18	Sumska	1	0	1	0	0
19	Ternopil'ska	0	0	0	0	1
20	Kharkivska	0	1	1	1	1
21	Khersonska	0	0	0	0	0
22	Khmelnyn'ska	0	1	1	0	0
23	Cherkaska	0	1	1	1	0
24	Chernivetska	0	0	0	0	0
25	Chernihiv'ska	1	0	0	0	0
26	Kyiv City	1	0	0	0	0
27	Sevastopol City	0	0	-	-	0
Ukraine		11	12	7	13	10

Table 64

Died of TB patients breakdown by age and gender (according to the data of the State Statistics Committee of Ukraine)												
No.	Age	Absolute number										
		Male					Female					
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	
1	Under 1 year old	0	4	2	3	0	3	1	2	1	1	1
2	1-4 years old	1	2	1	1	2	4	3	2	6	5	5
3	5-9 years old	1	1	0	1	0	0	1	0	0	1	1
4	10-14 years old	0	0	0	1	0	0	0	0	0	0	0
5	15-17 years old	2	0	0	0	1	0	0	0	0	0	0
6	18-24 years old	85	63	52	37	28	46	39	22	20	13	13
7	25-34 years old	781	714	626	481	396	252	213	179	145	126	126
8	35-44 years old	1508	1390	1210	1058	909	363	328	276	227	208	208
9	45-54 years old	1750	1652	1329	1128	1015	269	256	188	190	167	167
10	55-64 years old	1026	1054	870	782	759	159	151	127	117	102	102
11	65 and older	430	354	236	273	241	182	164	118	131	89	89
12	Unknown	0	0	0	0	0	0	0	0	0	1	1
Total		5584	5234	4326	3765	3351	1278	1156	914	837	713	713

Table 65

No.	Administrative territories	TB patients died of AIDS-associated disease *										
		Absolute number					Per 100,000 population					
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	
1	AR Crimea	154	158	-	-	-	7,9	8,1	-	-	-	
2	Vynnytska	20	20	33	25	19	1,2	1,2	2,0	1,6	1,2	
3	Volyńska	22	25	21	18	23	2,1	2,4	2,0	1,7	2,2	
4	Dnipropetrovska	590	552	412	447	459	17,8	16,7	12,5	13,7	14,1	
5	Donetska	568	470	366	199	179	12,9	10,8	8,5	10,1	9,1	
6	Zhytomyrska	43	42	38	38	39	3,4	3,3	3,0	3,0	3,1	
7	Zakarpatska	7	6	8	5	4	0,6	0,5	0,6	0,4	0,3	
8	Zaporizka	67	71	65	76	48	3,7	4,0	3,7	4,3	2,7	
9	Ivano-Frankivska	17	14	20	16	15	1,2	1,0	1,4	1,2	1,1	
10	Kyivska	103	93	90	89	103	6,0	5,4	5,2	5,2	6,0	
11	Kirovohradska	52	60	69	71	32	5,2	6,1	7,0	7,3	3,3	
12	Luhanska	79	82	26	10	12	3,5	3,6	1,2	1,4	1,7	
13	Lvivska	46	47	67	61	41	1,8	1,9	2,7	2,4	1,6	
14	Mykolajivska	180	149	129	109	115	15,3	12,7	11,0	9,4	9,9	
15	Odeska	340	315	292	300	275	14,3	13,2	12,2	12,6	11,6	
16	Poltavska	79	38	25	39	37	5,4	2,6	1,7	2,7	2,6	
17	Rivnenska	13	17	9	19	10	1,1	1,5	0,8	1,6	0,9	
18	Sumska	16	6	6	14	11	1,4	0,5	0,5	1,2	1,0	
19	Ternopijska	4	7	5	5	8	0,4	0,7	0,5	0,5	0,8	
20	Kharkivska	54	39	22	30	35	2,0	1,4	0,8	1,1	1,3	
21	Khersonska	55	53	41	45	63	5,1	4,9	3,8	4,2	5,9	
22	Khmelnytska	33	24	36	33	18	2,5	1,8	2,8	2,5	1,4	
23	Cherkaska	79	60	52	58	51	6,2	4,7	4,1	4,6	4,1	
24	Chernivetska	4	2	6	8	4	0,4	0,2	0,7	0,9	0,4	
25	Chernihivska	57	47	34	32	51	5,3	4,4	3,2	3,1	4,9	
26	Kyiv City	75	99	122	167	136	2,7	3,5	4,3	5,9	4,7	
27	Sevastopol City	29	26	-	-	-	7,6	6,8	-	-	-	
Ukraine		2 786	2 522	1 994	1 914	1 788	6,1	5,6	4,6	4,5	4,2	

* The data are used from the reporting form No. 33-zdorov "Report on TB Patients"

Table 66

Hospital and sanatorium care provided for TB patients in accordance with the geographically distributed health care facilities of MOH of Ukraine *							
No.	Administrative territories	% of treated patients with all forms of active tuberculosis vs. average annual number					
		2015		2016			
		in hospitals	in day care hospitals	in sanatoriums	in hospitals	in day care hospitals	in sanatoriums
1	AR Crimea	-	-	-	0,0	0,0	0,0
2	Vynnytska	127,1	0,0	2,6	122,9	0,0	3,7
3	Volyrska	114,4	2,6	13,9	112,0	2,1	10,5
4	Dnipropetrovska	97,4	16,2	3,8	98,3	14,5	3,4
5	Donetska	122,1	4,7	1,4	138,1	5,3	1,7
6	Zhytomyrska	99,5	0,2	22,8	97,49	0,0	18,0
7	Zakarpatska	107,9	2,3	3,4	106,7	2,5	1,7
8	Zaporizka	91,7	0,0	0,5	85,5	0,0	0,3
9	Ivano-Frankivska	165,4	18,8	4,2	168,1	16,0	5,3
10	Kyivska	75,3	3,8	0,2	72,7	1,5	0,3
11	Kirovohradska	88,6	5,7	6,5	87,9	14,9	5,8
12	Luhanska	83,0	0,0	4,3	70,4	0,0	1,6
13	Lvvska	120,7	0,0	13,0	126,6	0,0	10,9
14	Mykolajivska	126,4	13,4	63,6	120,7	48,5	42,2
15	Odeska	90,1	10,0	2,1	97,9	0,8	1,2
16	Poltavska	82,7	0,0	10,5	72,9	0,0	5,0
17	Rivnenska	88,0	0,0	2,0	82,8	0,0	1,8
18	Sumska	96,3	3,5	0,7	92,7	5,0	1,0
19	Ternopijska	128,0	0,0	4,2	133,0	0,0	1,5
20	Kharkivska	102,3	9,2	15,2	97,9	9,22	13,3
21	Khersonska	117,2	2,8	0,4	112,3	1,64	0,7
22	Khmelnytska	146,1	25,0	4,0	147,3	26,7	2,0
23	Cherkaska	120,8	10,0	4,6	116,6	8,0	4,3
24	Chernivetska	81,8	0,0	41,5	94,5	0,6	42,6
25	Chernihivska	112,5	0,0	0,8	122,9	0,0	0,6
26	Kyiv City	63,3	1,2	0,0	70,6	0,0	2,1
27	Sevastopol City	-	-	-	0,0	0,0	0,0
Ukraine		102,7	6,1	8,3	103,2	6,5	6,3

* The data are used from the reporting form No. 33-zdorov "Report on TB Patients"

Table 67

No.	Administrative territories	Chemoprophylaxis among TB contacts *											
		Number of persons living in nidi with TB patients with bacteriaexcretion						of them, with patients aged 18 and older					
		2015			2016			2015			2016		
Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%		
1	AR Crimea	-	-	-	0	0,0	-	-	-	-	-	0	0,0
2	Vinnyska	1403	1246	88,8	946	89,1	857	749	87,4	598	513	85,8	85,8
3	Volynska	1023	967	94,5	707	91,2	585	539	92,1	427	383	89,7	89,7
4	Dnipropetrovska	4164	3901	93,7	3 736	89,5	1752	1619	92,4	1 610	1 335	82,9	82,9
5	Donetska	1583	1025	64,8	1 649	71,0	890	437	49,1	846	489	57,8	57,8
6	Zhytomyrska	2540	2368	93,2	2 189	87,1	1486	1339	90,1	1 403	1 169	83,3	83,3
7	Zakarpatska	1249	1212	97,0	1 244	95,1	519	483	93,1	536	495	92,4	92,4
8	Zaporizka	1731	1586	91,6	1 629	90,2	743	638	85,9	596	501	84,1	84,1
9	Ivano-Frankivska	1324	1284	97,0	1 124	94,0	698	674	96,6	653	603	92,3	92,3
10	Kyivska	2722	2463	90,5	2 399	87,4	1622	1531	94,4	1 488	1 275	85,7	85,7
11	Kirovohradska	839	805	95,9	704	97,9	506	490	96,8	427	427	100,0	100,0
12	Luhanska	575	549	95,5	1 048	74,5	261	235	90,0	407	293	72,0	72,0
13	Lvska	2209	2001	90,6	1 881	93,7	1127	1042	92,5	906	822	90,7	90,7
14	Mykolaivska	1233	1146	92,9	941	92,5	459	405	88,2	457	393	86,0	86,0
15	Odeska	2096	1834	87,5	3 470	59,7	232	211	90,9	1 512	476	31,5	31,5
16	Poltavska	1378	1262	91,6	1 269	89,7	851	787	92,5	851	762	89,5	89,5
17	Rivnenska	1037	983	94,8	1 368	91,4	440	394	89,5	674	595	88,3	88,3
18	Sumska	1433	1234	86,1	1 227	86,0	701	585	83,6	502	407	81,1	81,1
19	Terнопiljska	1228	951	77,4	1 038	86,3	607	522	86,0	581	485	83,5	83,5
20	Kharkivska	2954	2894	98,0	2 421	78,9	1484	1469	99,0	844	712	84,4	84,4
21	Khersonska	1592	1416	88,9	1 285	87,2	680	566	83,2	489	373	76,3	76,3
22	Khmelnytska	1027	984	95,8	1 194	96,2	421	384	91,2	536	497	92,7	92,7
23	Cherkaska	970	943	97,2	981	99,8	540	514	95,2	538	537	99,8	99,8
24	Chernivetska	975	868	89,0	598	87,8	559	474	84,8	391	332	84,9	84,9
25	Chernihivska	817	753	92,2	721	90,6	435	382	87,8	443	390	88,0	88,0
26	Kyiv City	652	551	84,5	637	84,8	233	147	63,1	175	153	87,4	87,4
27	Sevastopol City	-	-	-	0	0,0	-	-	-	0	0	0,0	0,0
	Ukraine	38754	35226	90,9	36 406	84,9	18572	16520	89,0	17 890	14 417	80,6	80,6

* The data are used from the reporting form No. 33-zdorov "Report on TB Patients"

Table 68

Administrative territories		Chemoprophylaxis among TB contacts (continued) *											
		Number of persons living in nidi with TB patients with bacteriaexcretion						of them, with patients aged 18 and older					
		2015			2016			2015			2016		
No.	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	Those subjected to chemo-prophylaxis	Those completed the chemoprophylaxis course	%	
1	-	-	-	0	0	0,0	-	-	-	0	0	0,0	
2	AR Crimea	346	317	91,6	205	196	95,6	54	48	88,9	27	26	96,3
3	Vinnyska	320	315	98,4	216	206	95,4	25	24	96,0	20	19	95,0
4	Volynska	976	939	96,2	1 027	964	93,9	177	170	96,0	162	153	94,4
5	Dnipropetrovska	432	356	82,4	511	442	86,5	35	25	71,4	61	45	73,8
6	Donetska	599	580	96,8	497	468	94,2	86	80	93,0	69	64	92,8
7	Zhytomyrska	445	445	100,0	439	439	100,0	103	103	100,0	79	77	97,5
8	Zakarpatska	507	488	96,3	581	531	91,4	121	116	95,9	79	79	100,0
9	Zaporizka	247	243	98,4	248	237	95,6	46	44	95,7	34	34	100,0
10	Ivano-Frankivska	627	535	85,3	436	388	89,0	109	77	70,6	77	58	75,3
11	Kyivska	222	222	93,7	174	174	100,0	22	21	95,5	11	11	100,0
12	Kirovohradska	170	170	100,0	398	320	80,4	16	16	100,0	115	48	41,7
13	Luhanska	621	599	96,5	581	559	96,2	121	114	94,2	99	99	100,0
14	Lvska	382	364	95,3	241	238	98,8	74	71	95,9	22	22	100,0
15	Mykolajvska	811	724	89,3	786	645	82,1	122	108	88,5	399	356	89,2
16	Odeska	309	284	91,9	264	235	89,0	48	46	95,8	28	22	78,6
17	Poltavska	383	381	99,5	513	482	94,0	42	41	97,6	42	42	100,0
18	Rivnenska	477	410	86,0	496	275	55,4	93	86	92,5	84	33	39,3
19	Sumska	385	222	57,7	194	177	91,2	40	37	92,5	42	39	92,9
20	Ternopijska	888	861	97,0	787	626	79,5	143	139	97,2	108	84	77,8
21	Kharkivska	410	389	94,9	386	372	96,4	62	59	95,2	57	52	91,2
22	Khersonska	282	277	98,2	296	293	99,0	39	38	97,4	120	119	99,2
23	Cherkaska	254	254	100,0	296	295	99,7	35	35	100,0	44	44	100,0
24	Chernihivska	228	207	90,8	144	131	91,0	51	50	98,0	19	19	100,0
25	Chernihivska	215	211	98,1	143	140	97,9	46	46	100,0	19	19	100,0
26	Kyiv City	261	261	100,0	275	236	85,8	105	93	88,6	114	98	86,0
27	Sevastopol City	-	-	-	0	0	0,0	-	-	-	0	0	0,0
Ukraine		10812	10054	93,0	10 134	9 069	89,5	1815	1687	92,9	1 931	1 662	86,1

* The data are used from the reporting form No. 33-zdorov "Report on TB Patients"

THE TOTAL POPULATION OF UKRAINE

is 42,590,879, the area is 603,628 thousand sq. km.

Ukraine is an industrial and agrarian country with predominant production of raw materials. It is one of the leading exporters of some types of agricultural products and foodstuffs. The national economic complex of the country includes the following types of industry: mining (coal, oil and gas, iron and manganese ore), some branches of mechanical engineering, ferrous and nonferrous iron and steel making; Ukraine is a powerful producer of electricity. Production of carrier rockets, satellites and equipment for space exploration has been set up. Ukraine is a significant producer of weapons — tanks, military and transport aircraft, anti-aircraft missile systems, and optical equipment. Ukraine is one of the founding members of the United Nations, as well as a member of more than forty international organizations. The difficult situation with budget revenues is compounded by significant expenditures for military operations in the east. The IMF emphasized that GDP per capita (purchasing power parity) in Ukraine remains very low — only 20% of the average for the EU and the second lowest indicator among all the countries in Central and Eastern Europe. During 2016, the population decreased by 168,782 people due to a natural decrease (186,594 people in 2015), while the migration increase of 10,6 thousand people was registered.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	34088	X
TB incidence (new cases + relapses)	28 800	67,6
of them	23 292	54,7
new cases		
TB/HIV	5 622	13,2
0-14 years old	571	8,8
15-17 years old	228	20,4
Extrapulmonary TB cases	2 711	6,4
Pulmonary TB cases with laboratory confirmation	18 361	71,1%
Pulmonary TB cases with clinical diagnosis	7 470	28,9%
Prevalence	34 966	82,1

Indicator	Abs. No.	Per 100,000 pop.
of them		
TB/HIV	6 386	15,0
TB mortality	4 064	9,5
TB/HIV	1 788	4,2

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	14 548
per 10,000 people	343
Number of sanatorium TB beds	7 833
Average bed stay	91,9
Bed turn-over	2,9
Average number of bed occupancy days	267,2
TB specialists staffing in the civil sector facilities	2 188/0,52 per 10,000 people

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	229 128,40	22,2%
NAMS	8 246,80	0,8%
State Penitentiary Service of Ukraine	12 616,67	1,2%
Ministry of Defense of Ukraine	234,34	0,02%
GF	410 799,11	39,9%
Local budget	352 733,15	34,2%
Others	16 601,66	1,6%

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	6 145	2,6
New cases of MTB+ C+ covered by DST	13 097	97,1
Cases of MTB+ C+ re-treatment covered by DST	7 050	95,4
MDR-TB among new cases of MTB+ C+	2 881	22,0
MDR-TB among MTB+ C+ re-treatment cases	2 875	40,8

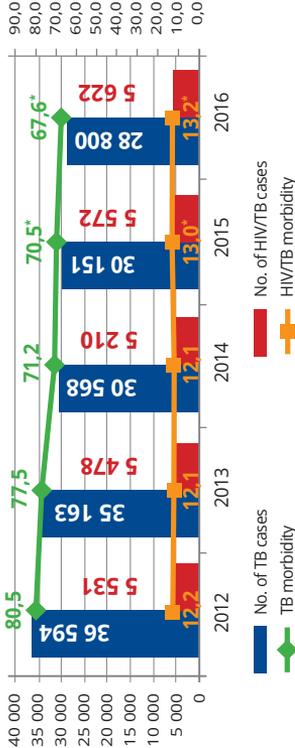
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	34 434	97,6
TB/HIV + co-trimoxazole	6 882	82,5
TB/HIV + ART	5 901	71,3

Laboratory service (civil sector), 2016

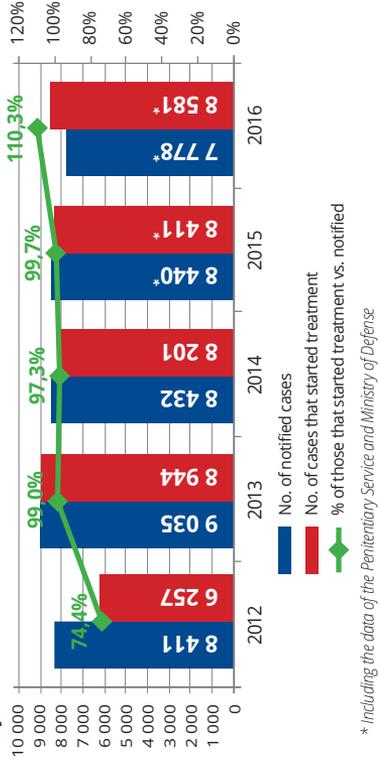
Laboratory level	Abs. No.	% that passed EQC
I	703	94,7
II	59	100
III	26	88,46

TB incidence (new cases + relapses)



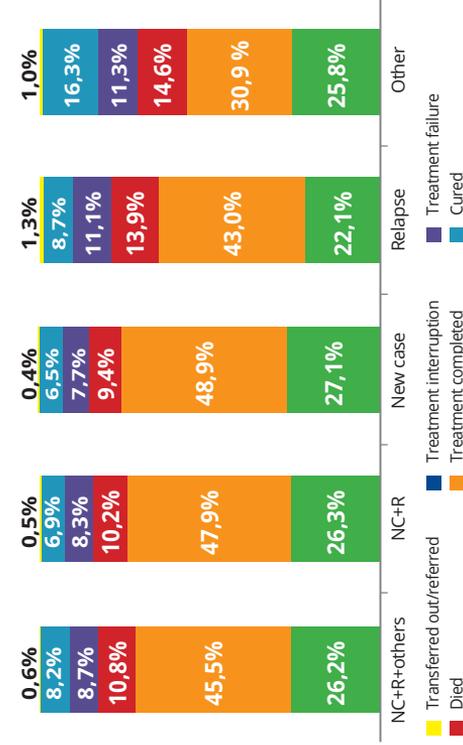
* The calculation is made based on the population of the territories, taking into account those temporarily uncontrolled by the Government of Ukraine

Number of TB patients with the diagnosis of newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment

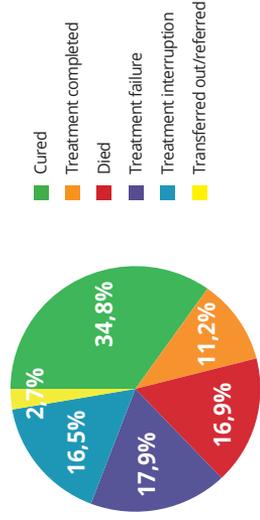


* Including the data of the Penitentiary Service and Ministry of Defense

TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



VINNYTSKA OBLAST

The total population is 1,595,078

This is the oblast with prevailing development of agriculture and industry. The rural population makes up almost 50%. There are 29 administrative territories in the oblast: 27 regions, one town of oblast significance, the oblast administrative center is the city of Vinnytsia. eight administrative territories belong to the zone of radiological control in the result of the Chernobyl radiation incident. There are 27 primary health care centers in the oblast, and 5 primary health care centers in the oblast center. Territorial TB facilities are represented by TB stations, operating as a part of health care facilities of the secondary level.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 036	X
TB incidence (new cases + relapses)	977	61,3
of them new cases	769	48,2
TB/HIV	98	6,1
0-14 years old	13	5,3
15-17 years old	5	10,8
Extrapulmonary TB cases	94	5,9
Pulmonary TB cases with laboratory confirmation	627	71,2%
Pulmonary TB cases with clinical diagnosis	254	28,8%
Prevalence	1 062	66,6
of them	107	6,7
TB/HIV	118	7,4
TB mortality	19	1,2

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	7 273,00	38,0
GF	6 215,18	32,5
Local budget	5637,30	29,4
Other	21,9	0,1

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	142	2,6
New cases of MTB+ C+ covered by DST	421	95,2
Cases of MTB+ C+ re-treatment covered by DST	170	85,4
MDR-TB among new cases of MTB+ C+	94	22,3
MDR-TB among MTB+ C+ re-treatment cases	77	45,3

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	430
per 10,000 people	2,72
Number of sanatorium TB beds	275
Average bed stay	66,9
Bed turn-over	3,7
Average number of bed occupancy days	247,4
TB specialists staffing in the civil sector facilities	88/0,56 per 10,000 people

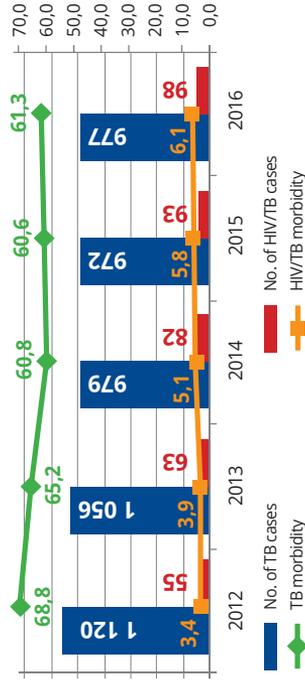
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	32	93,8
II	2	100
III	1	100

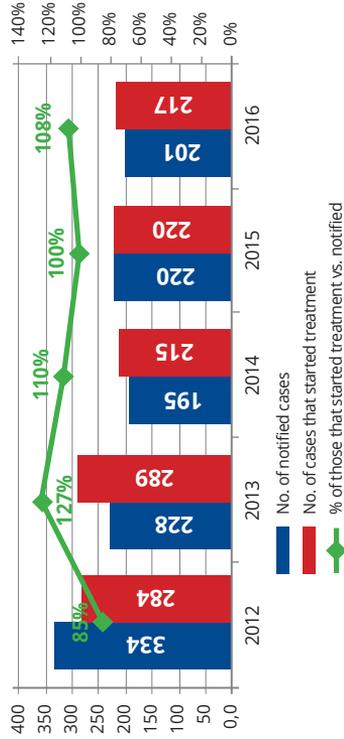
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 016	97,9
TB/HIV + co-trimoxazole	84	70,6
TB/HIV + ART	92	75,4

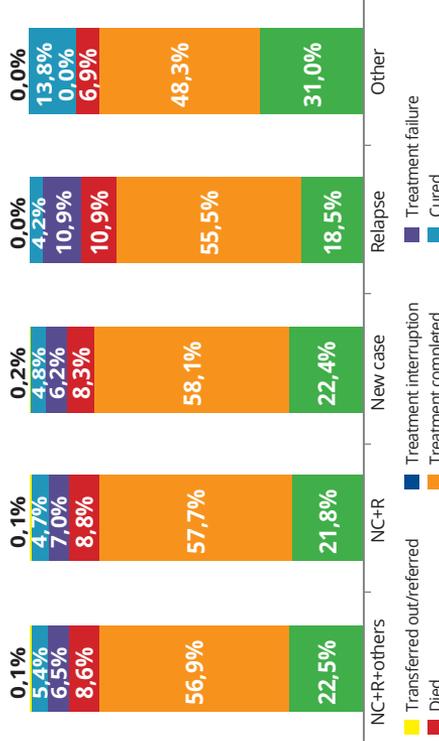
TB incidence (new cases + relapses)



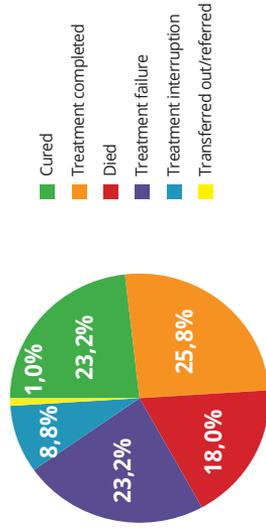
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



VOLYNska OBLAST

The total population is 1,039,940

The main branches of specialization in the oblast are agriculture, industry (first of all, food industry) and transport. The leading branch of the economy is the agro-industrial sector, which provides almost half of its aggregate product. Agriculture specializes in meat and dairy branch of animal husbandry, as well as in production of grain, sugar beet, vegetables, potatoes.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	834	X
TB incidence (new cases + relapses)	818	78,7
of them	620	59,6
new cases	76	7,3
TB/HIV	13	5,3
0-14 years old		
15-17 years old	9	25,8
Extrapulmonary TB cases	103	9,9
Pulmonary TB cases with laboratory confirmation	613	86,3
Pulmonary TB cases with clinical diagnosis	97	13,7
Prevalence	849	81,6
of them	64	6,2
TB/HIV	155	14,9
TB mortality	23	2,2
TB/HIV		

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	4 687,56	21,6
GF	4 820,81	22,2
Local budget	6 422,08	29,6
Other	5 771,1	26,6

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	187	1,9
New cases of MTB+ C+ covered by DST	401	96,4
Cases of MTB+ C+ re-treatment covered by DST	198	93,4
MDR-TB among new cases of MTB+ C+	66	16,5
MDR-TB among MTB+ C+ re-treatment cases	105	53,0

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	420
per 10,000 people	4,1
Number of sanatorium TB beds	200
Average bed stay	102,0
Bed turn-over	2,21
Average number of bed occupancy days	272,9
TB specialists staffing in the civil sector facilities	88/0,56 per 10,000 people

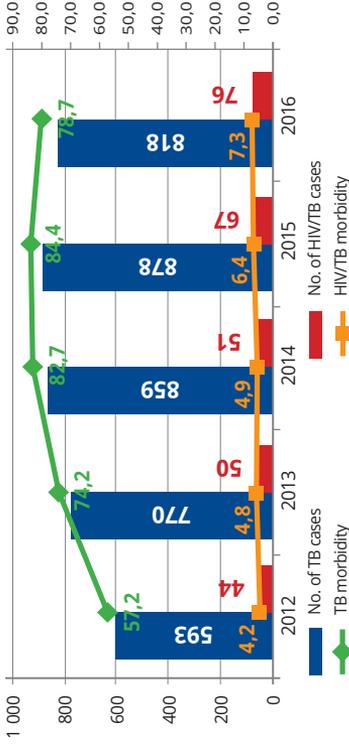
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	20	100
II	1	100
III	1	100

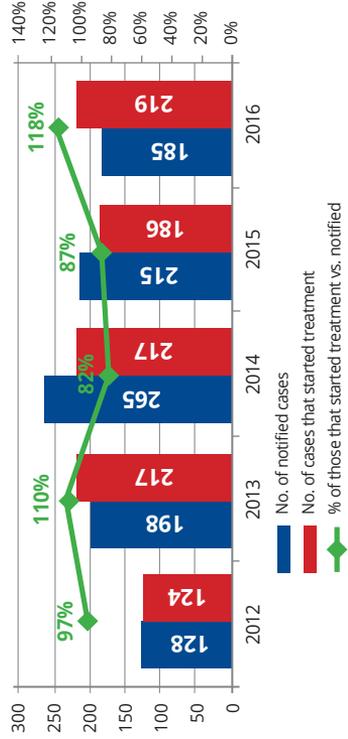
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	858	98,4
TB/HIV + co-trimoxazole	87	97,8
TB/HIV + ART	73	86,9

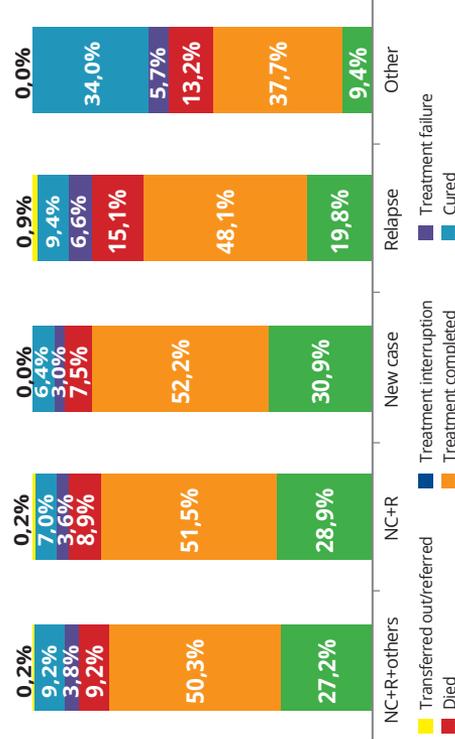
TB incidence (new cases + relapses)



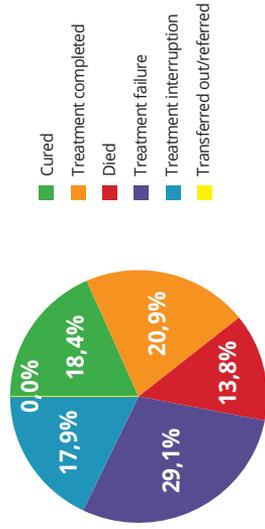
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



DNIPROPETROVSKA OBLAST

The total population is 3,251,575

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	24 170,92	17,9
GF	59 049,88	43,6
Local budget	50 556,57	37,4
Other	1 531,53	1,1

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	425	1,9
New cases of MTB+ C+ covered by DST	1 005	97,1
Cases of MTB+ C+ re-treatment covered by DST	1 187	98,6
MDR-TB among new cases of MTB+ C+	327	32,5
MDR-TB among MTB+ C+ re-treatment cases	498	42,0

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	1 475
per 10,000 people	4,57
Number of sanatorium TB beds	530
Average bed stay	94,2
Bed turn-over	2,8
Average number of bed occupancy days	266,6
TB specialists staffing in the civil sector facilities	157/0,49 per 10,000 people

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	3 926	X
TB incidence (new cases + relapses)	2 614	80,4
of them new cases	2 105	64,7
TB/HIV	794	24,4
0-14 years old	83	16,8
15-17 years old	17	22,0
Extrapulmonary TB cases	340	10,5
Pulmonary TB cases with laboratory confirmation	1 418	63,1%
Pulmonary TB cases with clinical diagnosis	831	36,9%
Prevalence	3 717	114,3
of them TB/HIV	1 072	33,0
TB mortality	518	15,9
TB/HIV	459	14,1

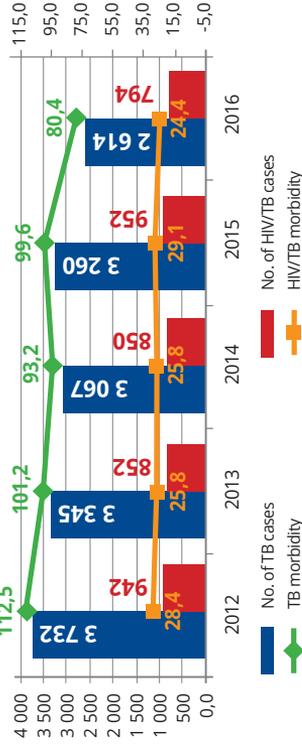
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	47	97,9
II	4	100
III	2	100

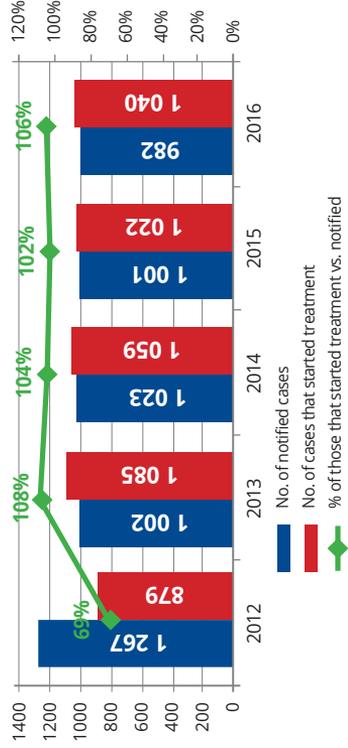
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	4 083	99,2
TB/HIV + co-trimoxazole	1 522	93,0
TB/HIV + ART	1 117	68,8

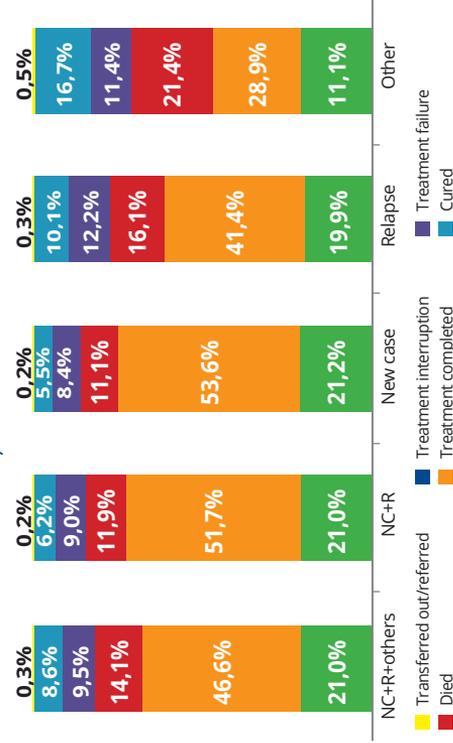
TB incidence (new cases + relapses)



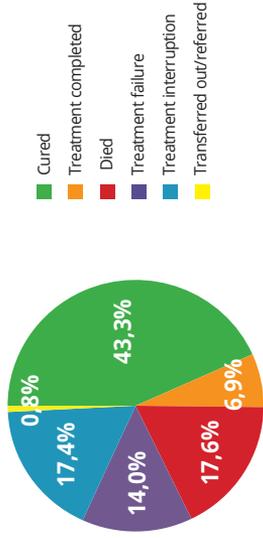
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



DONETSKA OBLAST

(areas controlled by the Government of Ukraine)

The total population is 1,965,436

The main areas of specialization in the oblast are petrochemical industry, ferrous and nonferrous iron and steel-making, chemical industry, mechanical engineering. In mechanical engineering, heavy engineering plays the biggest role. Agriculture specializes in vegetable, grain and dairy production with milk and meat cattle breeding. The main branches of the food industry are well-developed.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 587	X
TB incidence (new cases + relapses)	1 413	71,9
of them	1 172	59,6
new cases	471	24,0
TB/HIV	28	10,6
0-14 years old	6	12,7
15-17 years old		
Extrapulmonary TB cases	51	2,6
Pulmonary TB cases with laboratory confirmation	888	66,7%
Pulmonary TB cases with clinical diagnosis	443	33,3
Prevalence	1 631	83,0
of them	493	25,1
TB/HIV	244	12,4
TB mortality	179	9,1
TB/HIV		

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	8 563,3	18,7
GF	10 344,74	22,6
Local budget	25 762,73	56,2
Other	1 159,76	2,5

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	388	3,5
New cases of MTB+ C+ covered by DST	583	100
Cases of MTB+ C+ re-treatment covered by DST	290	100
MDR-TB among new cases of MTB+ C+	164	28,1
MDR-TB among MTB+ C+ re-treatment cases	150	51,7

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	750
per 10,000 people	3,85
Number of sanatorium TB beds	450
Average bed stay	105,5
Bed turn-over	2,7
Average number of bed occupancy days	286,7
TB specialists staffing in the civil sector facilities	69/0,35 per 10,000 people

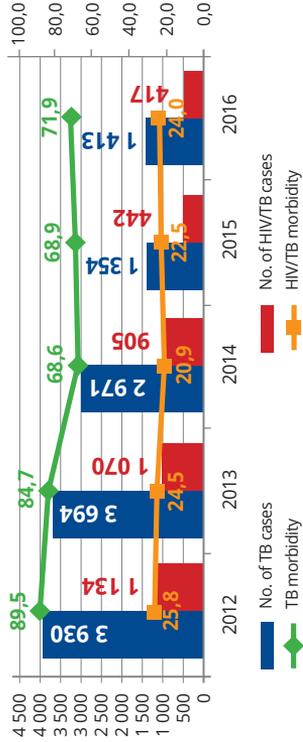
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	24	91,7
II	2	100,0
III	2	50,0

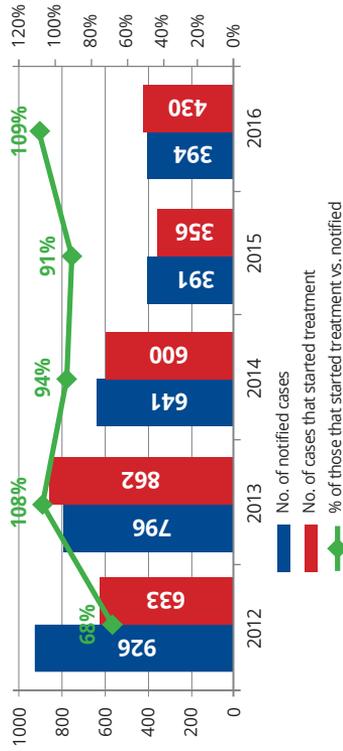
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 673	92,7
TB/HIV + co-trimoxazole	526	80,4
TB/HIV + ART	458	70,4

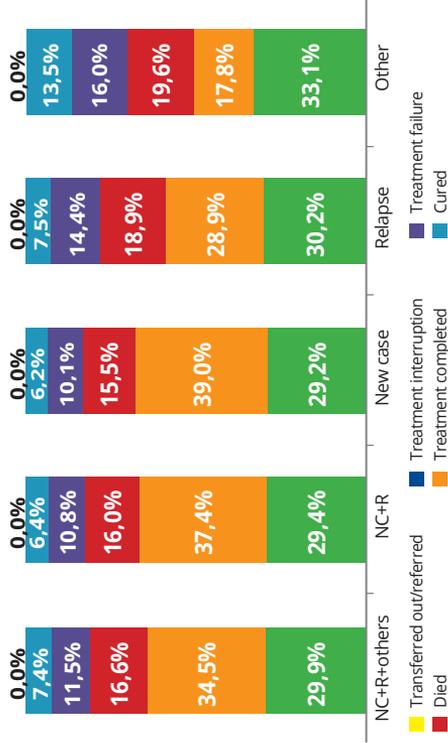
TB incidence (new cases + relapses)



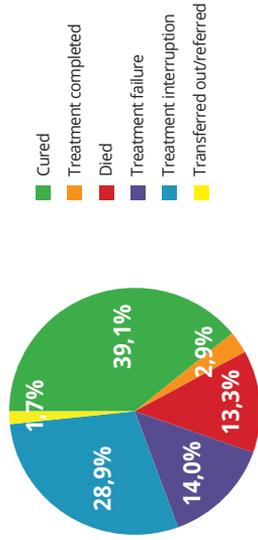
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



ZHYTOMYRSKA OBLAST

The total population is 1,248,318

There are 23 regions, 11 towns, including 5 towns of the oblast subordination, 43 urban-type communities, 1,624 rural communities. Prevention, rehabilitation and treatment of residents are carried out at 22 central region hospitals, 9 municipal hospitals, 1 central pediatric municipal hospital, 1 central region outpatient clinic, 1 region hospital, 14 district hospitals, 10 municipal outpatient clinics, 427 health posts, 14 dental clinics; 5 paramedic posts, 29 oblast health care facilities and institutions, 4 colleges.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 113	X
TB incidence (new cases + relapses)	971	77,8
of them	780	62,5
TB/HIV	146	11,7
0-14 years old	22	10,7
15-17 years old	7	19,0
Extrapulmonary TB cases	103	8,3
Pulmonary TB cases with laboratory confirmation	667	76,8%
Pulmonary TB cases with clinical diagnosis	201	23,2
Prevalence	1 314	105,3
of them	180	14,4
TB/HIV	134	10,7
TB mortality	39	3,1

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	6 401,80	16,7
GF	7 184,62	18,7
Local budget	24 758,42	64,6
Other	0	0,0

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	457	5,7
New cases of MTB+ C+ covered by DST	485	100
Cases of MTB+ C+ re-treatment covered by DST	270	100
MDR-TB among new cases of MTB+ C+	97	20,0
MDR-TB among MTB+ C+ re-treatment cases	108	40,0

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	440
per 10,000 people	3,54
Number of sanatorium TB beds	385
Average bed stay	76,3
Bed turn-over	3,4
Average number of bed occupancy days	256,5
TB specialists staffing in the civil sector facilities	62/0,5 per 10,000 people

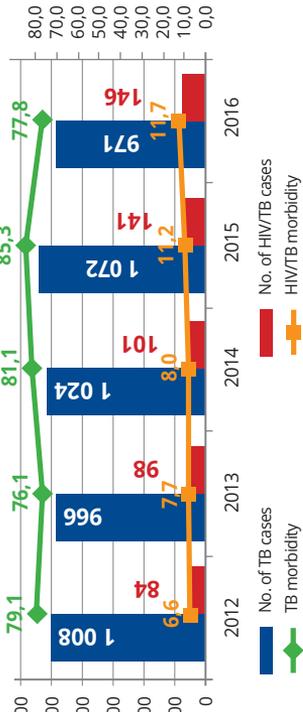
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	30	100
II	0	-
III	1	100

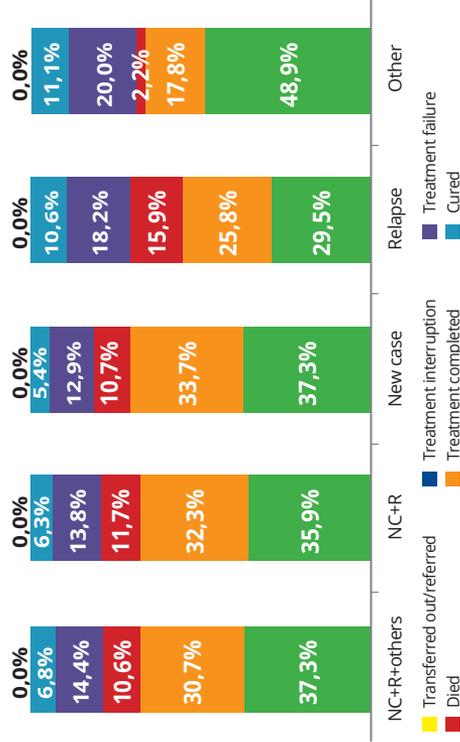
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 103	98,2
TB/HIV + co-trimoxazole	154	83,2
TB/HIV + ART	156	84,8

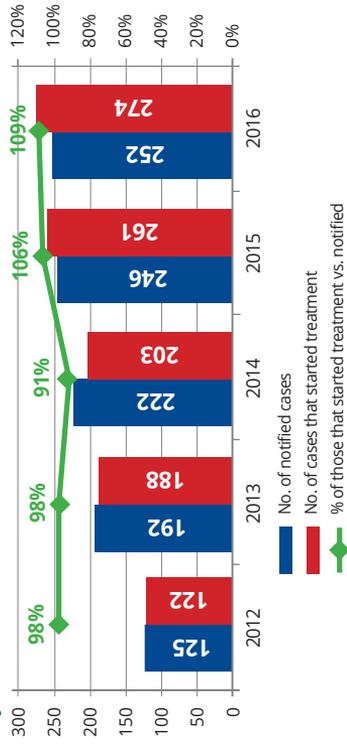
TB incidence (new cases + relapses)



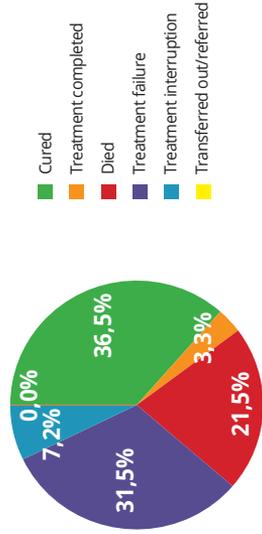
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



ZAKARPATSKA OBLAST

The total population is 1,256,325

The oblast is located on the south-western slopes and foothills of the Eastern Carpathians. Almost two thirds of the oblast territory are occupied by the Carpathian Mountains. The oblast borders on 4 countries of the European region (Poland, Slovakia, Hungary, Romania). Migration processes are characteristic for the oblast (border, intra-regional, labor, seasonal). Representatives of about 76 different nationalities live in the region. The Roma population is one of the numerous ethnic minorities in the oblast and comprises 51,577 people.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 107	X
TB incidence (new cases + relapses)	875	69,6
of them new cases	765	60,9
TB/HIV	28	2,2
0-14 years old	17	6,8
15-17 years old	9	21,0
Extrapulmonary TB cases	27	2,1
Pulmonary TB cases with laboratory confirmation	657	77,6%
Pulmonary TB cases with clinical diagnosis	190	22,4%
Prevalence	1 397	111,2
of them TB/HIV	37	2,9
TB mortality	131	10,4
TB/HIV	4	0,3

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	6 699,97	14,3
GF	13 403,76	28,5
Local budget	26 685,22	56,8
Other	200,05	0,4

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	161	2,1
New cases of MTB+ C+ covered by DST	469	92,5
Cases of MTB+ C+ re-treatment covered by DST	196	82,0
MDR-TB among new cases of MTB+ C+	71	15,1
MDR-TB among MTB+ C+ re-treatment cases	96	49,0

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	640
per 10,000 people	5,1
Number of sanatorium TB beds	210
Average bed stay	87,6
Bed turn-over	3,3
Average number of bed occupancy days	285,7
TB specialists staffing in the civil sector facilities	84/0,67 per 10,000 people

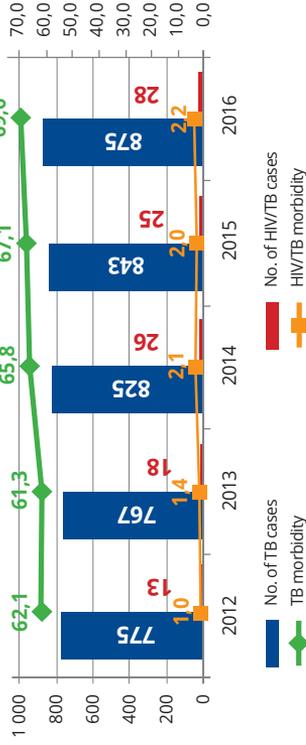
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	28	96,4
II	4	100
III	1	100

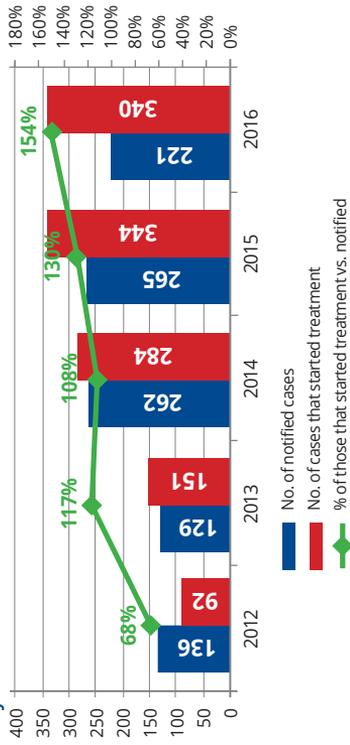
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 185	100
TB/HIV + co-trimoxazole	40	97,6
TB/HIV + ART	32	82,1

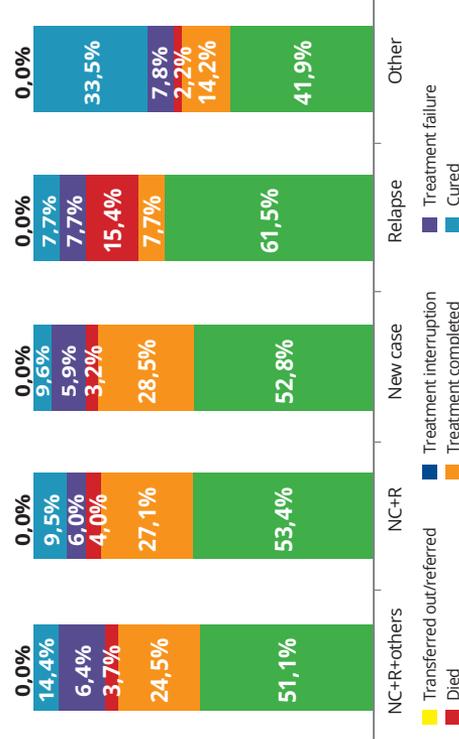
TB incidence (new cases + relapses)



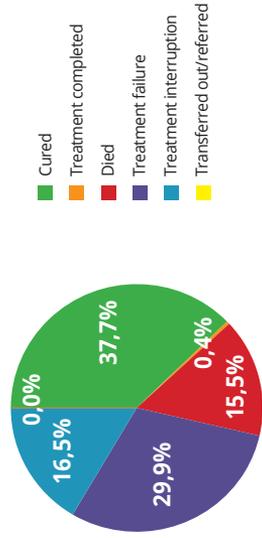
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



ZAPORIZKA OBLAST

The total population is 1,752,853

Mechanical engineering, transport, communications, consumer goods industry, agriculture, construction, trade, banking, real estate, legal services, education, culture and recreation are well-developed in Zaporizka oblast. It is one of the most technologically advanced regions of Ukraine with a significant scientific, technical and production potential. The oblast is a leading center of domestic aircraft engine production, production of transformers and other high-tech products; more than 160 powerful industrial enterprises operate in the oblast.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 455	X
TB incidence (new cases + relapses)	1 350	77,0
of them new cases	1 066	60,8
TB/HIV	207	11,8
0-14 years old	60	23,8
15-17 years old	13	31,8
Extrapulmonary TB cases	129	7,4
Pulmonary TB cases with laboratory confirmation	858	70,7%
Pulmonary TB cases with clinical diagnosis	356	29,3%
Prevalence	1 943	110,8
of them	269	15,3
TB/HIV	242	13,8
TB mortality	48	2,7

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	8 250,14	21,4
GF	10 446,61	27,1
Local budget	19 454,21	50,5
Other	370,526	1,0

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	398	5,0
New cases of MTB+ C+ covered by DST	629	100
Cases of MTB+ C+ re-treatment covered by DST	324	100
MDR-TB among new cases of MTB+ C+	162	25,8
MDR-TB among MTB+ C+ re-treatment cases	138	42,6

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	855
per 10,000 people	4,9
Number of sanatorium TB beds	50
Average bed stay	113,3
Bed turn-over	2,4
Average number of bed occupancy days	268,8
TB specialists staffing in the civil sector facilities	108/0,62 per 10,000 people

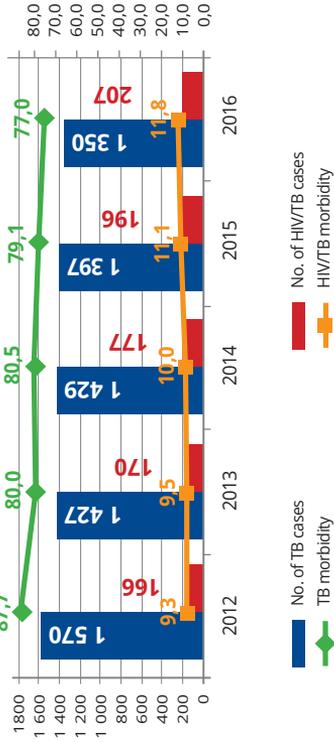
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	35	100
II	2	100
III	1	100

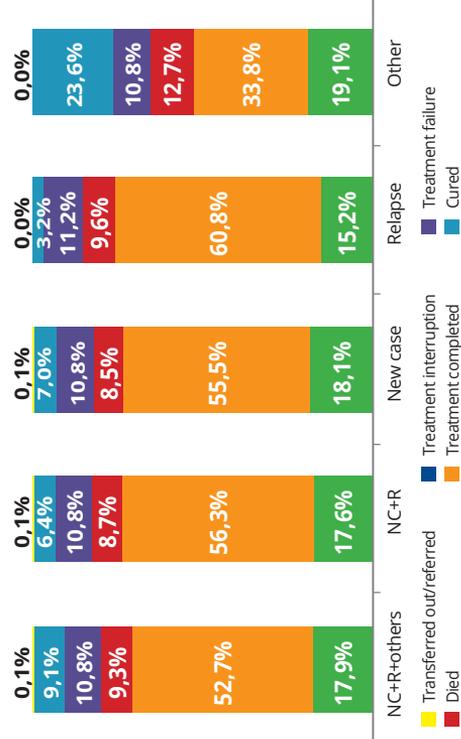
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 639	97,8
TB/HIV + co-trimoxazole	251	90,9
TB/HIV + ART	230	84,6

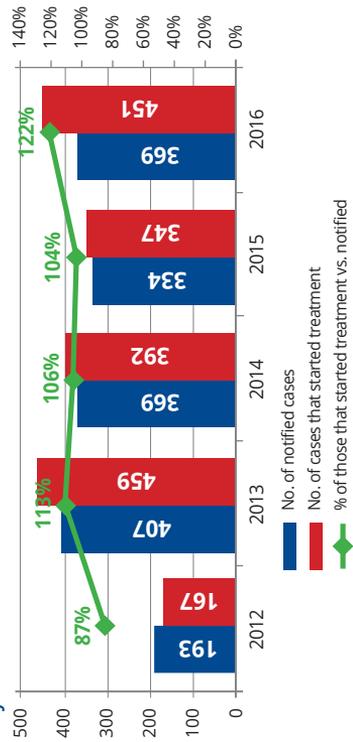
TB incidence (new cases + relapses)



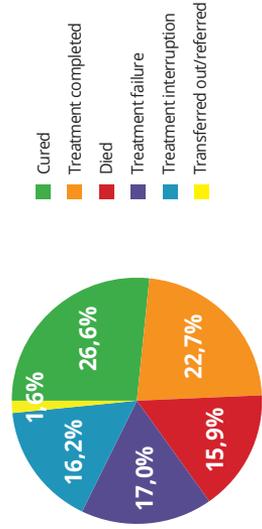
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



IVANO-FRANKIVSKA OBLAST

The total population is 1,379,626

Agriculture, private entrepreneurship, tourism are developed in the oblast.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	7 504,90	42,0
GF	5 462,02	30,6
Local budget	4 903,99	27,4

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 084	X
TB incidence (new cases + relapses)	914	66,2
of them	718	52,0
new cases	42	3,0
TB/HIV	13	5,5
0-14 years old	5	11,4
15-17 years old	85	6,2
Extrapulmonary TB cases	584	70,6%
Pulmonary TB cases with laboratory confirmation	243	29,4%
Pulmonary TB cases with clinical diagnosis	836	60,6
Prevalence	48	3,5
of them	86	6,2
TB/HIV	15	1,1

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	237	3,2
New cases of MTB+ C+ covered by DST	408	100
Cases of MTB+ C+ re-treatment covered by DST	258	100
MDR-TB among new cases of MTB+ C+	45	11,0
MDR-TB among MTB+ C+ re-treatment cases	57	22,1

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	570
per 10,000 people	4,1
Number of sanatorium TB beds	980
Average bed stay	93,5
Bed turn-over	3,0
Average number of bed occupancy days	280,6
TB specialists staffing in the civil sector facilities	135/0,98 per 10,000 people

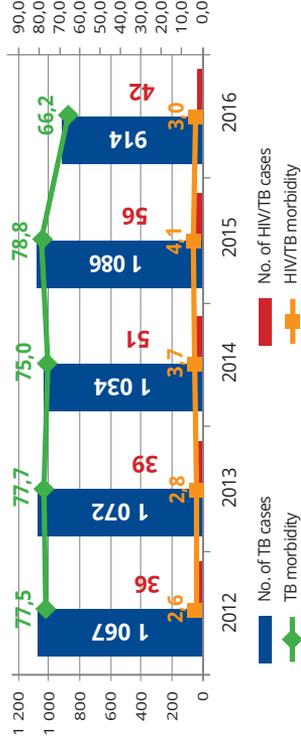
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	26	100
II	4	100
III	1	0

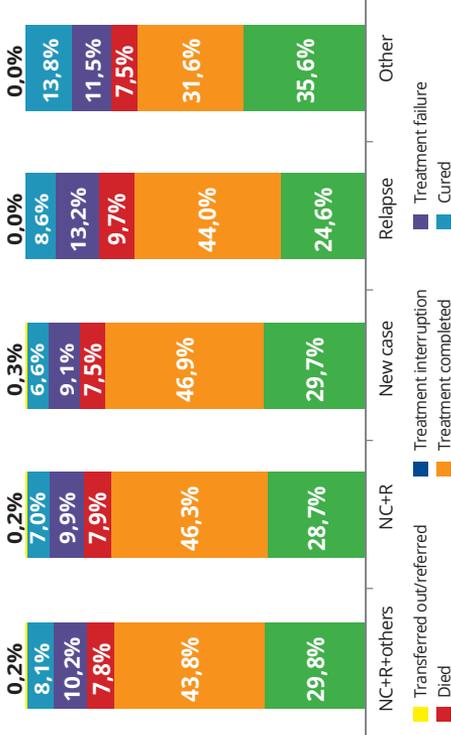
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1072	99,1
TB/HIV + co-trimoxazole	55	87,3
TB/HIV + ART	55	87,3

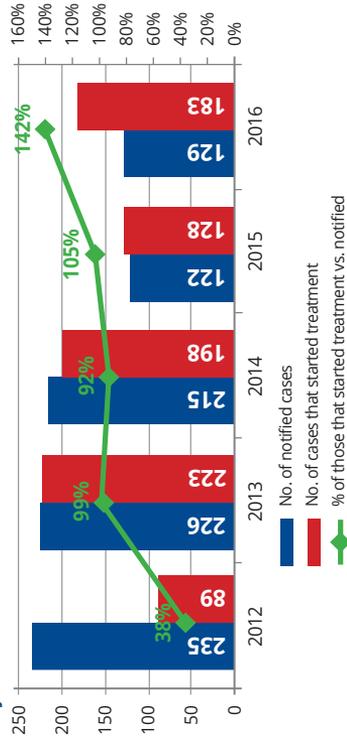
TB incidence (new cases + relapses)



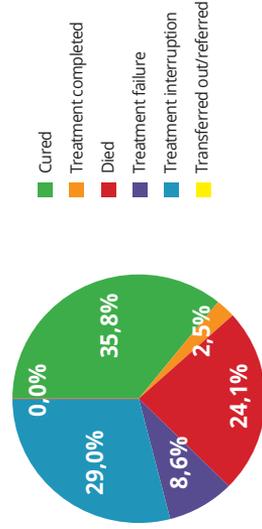
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



KYIV CITY

The total population is 2,865,262

The city of Kyiv is the capital of Ukraine, a large industrial center. The city is represented by numerous branches of the national economy: consumer goods and food industry, printing, pharmaceuticals, mechanical engineering, steel-making, aircraft construction. The feature of the region is significant migration processes. Due to the difficult economic situation in the country, the largest number of migrant workers is in Kyiv. Mass events associated with mass gatherings during a long period of time often take place in the city. The city has the largest number of people without a permanent place of residence in Ukraine. There are numerous foreign citizens, including labor immigrants. A significant number of young students resides in places of shared residence (dormitories).

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 760	X
TB incidence (new cases + relapses)	1 506	52,6
of them	1 336	46,6
TB/HIV	400	14,0
0-14 years old	29	6,5
15-17 years old	12	18,6
Extrapulmonary TB cases	179	6,2
Pulmonary TB cases with laboratory confirmation	886	67,3%
Pulmonary TB cases with clinical diagnosis	431	32,7%
Prevalence	1 634	57,0
of them	465	16,2
TB/HIV	167	5,8
TB mortality	136	4,7

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	9 200,30	23,5
GF	15 954,40	40,8
Local budget	13 711,15	35,1
Other	228,99	0,6

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	150	6,2
New cases of MTB+ C+ covered by DST	707	98,7
Cases of MTB+ C+ re-treatment covered by DST	290	98,3
MDR-TB among new cases of MTB+ C+	123	17,4
MDR-TB among MTB+ C+ re-treatment cases	113	39,0

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	810
per 10,000 people	2,81
Number of sanatorium TB beds	300
Average bed stay	92,0
Bed turn-over	1,8
Average number of bed occupancy days	165,3
TB specialists staffing in the civil sector facilities	113/0,39 per 10,000 people

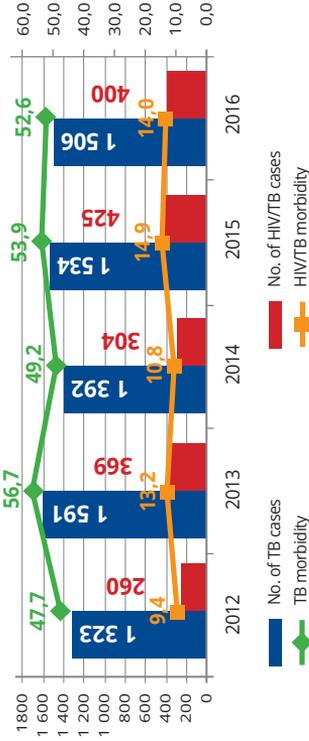
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	15	100
II	2	100
III	1	100

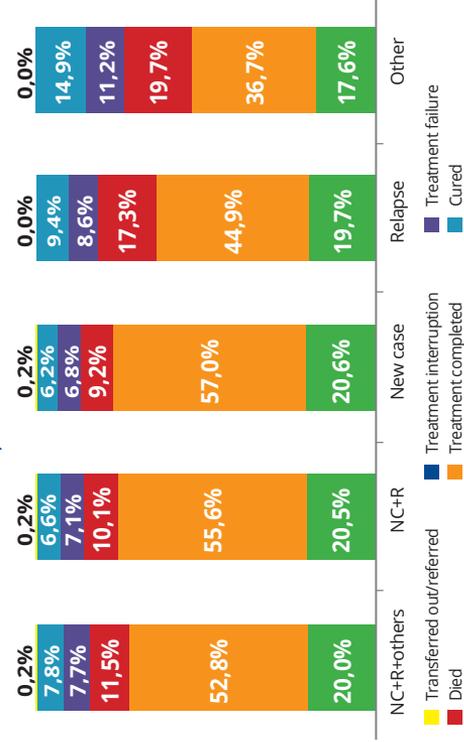
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 766	95,5
TB/HIV + co-trimoxazole	551	92,3
TB/HIV + ART	413	70,8

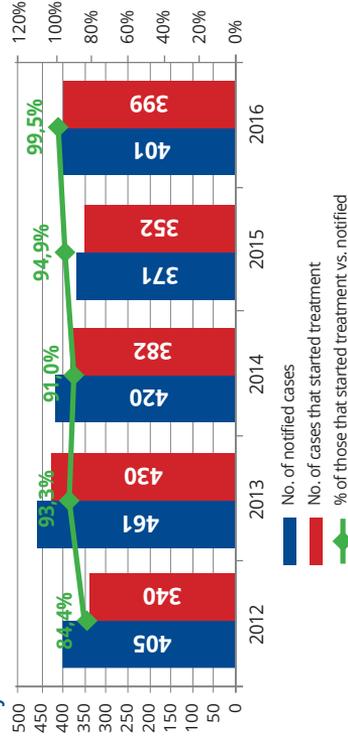
TB incidence (new cases + relapses)



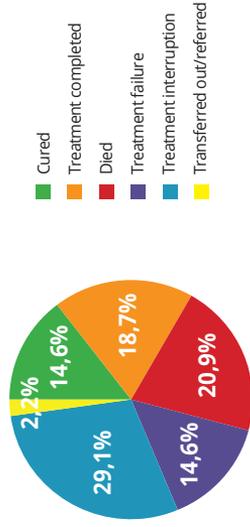
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



KYIVSKA OBLAST

The total population is 1,726,456

The oblast has highly developed agriculture and industry as well as a network of small agricultural enterprises throughout the oblast. Specificity of the metropolitan area is the high level of migration from other regions of the country, presence of the territory with the population affected by the Chernobyl radiation incident. Daily streams of people traveling from suburbs and other oblasts to work in Kyiv, two airports, a network of railways add to the risk of infectious diseases transmission and spreading, narcotics circulation, criminogenic situations aggravation, etc.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	938	X
TB incidence (new cases + relapses)	768	79,4
of them	648	67,0
TB/HIV	151	15,6
0-14 years old	14	9,7
15-17 years old	6	23,8
Extrapulmonary TB cases	49	5,1
Pulmonary TB cases with laboratory confirmation	571	80,5%
Pulmonary TB cases with clinical diagnosis	138	19,5%
Prevalence	994	102,8
of them	192	19,9
TB/HIV	99	10,2
TB mortality	32	3,3

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	6 735,10	24,1
GF	8 277,20	29,6
Local budget	12 564,10	44,9
Other	418,9	1,5

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	252	3,7
New cases of MTB+ C+ covered by DST	420	100
Cases of MTB+ C+ re-treatment covered by DST	193	100
MDR-TB among new cases of MTB+ C+	81	19,3
MDR-TB among MTB+ C+ re-treatment cases	100	51,8

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	480
per 10,000 people	5,0
Number of sanatorium TB beds	190
Average bed stay	95,0
Bed turn-over	2,4
Average number of bed occupancy days	230,5
TB specialists staffing in the civil sector facilities	48/0,50 per 10,000 people

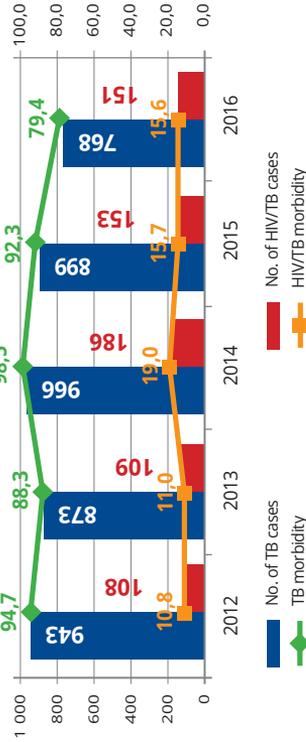
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	29	100
II	2	100
III	1	100

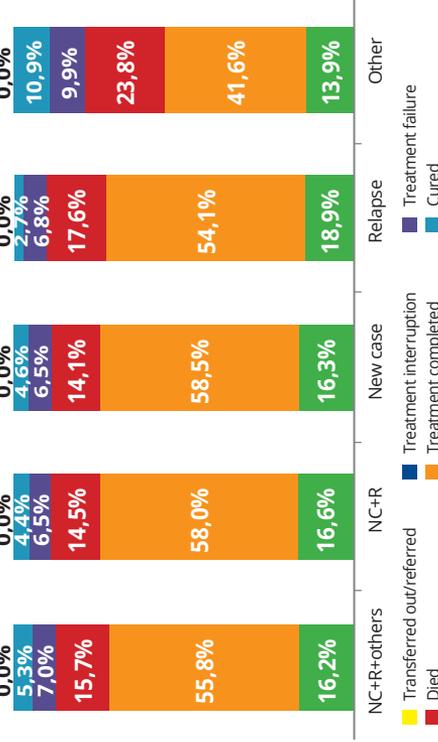
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	952	97,1
TB/HIV + co-trimoxazole	170	88,1
TB/HIV + ART	159	85,5

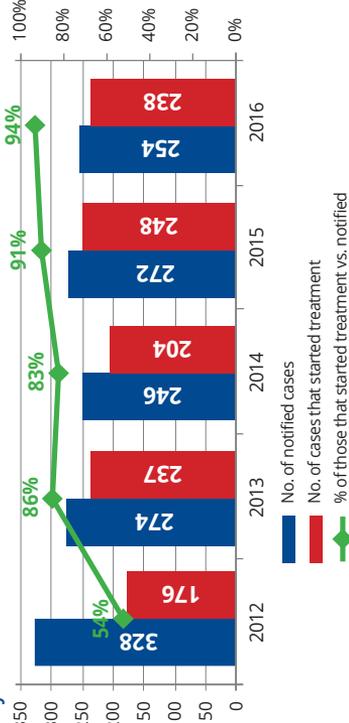
TB incidence (new cases + relapses)



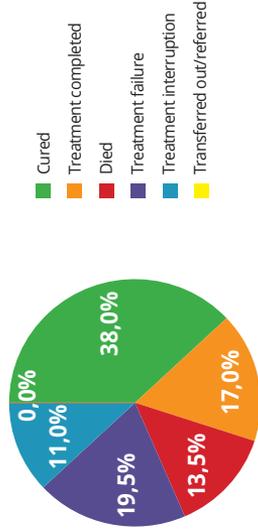
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



KIROVOHRADSKA OBLAST

The total population is 966,735

The oblast has a highly developed industry, and it has long been known as a region with well-developed agriculture. In the sectoral structure of gross agricultural production, the leading place belongs to crop production, its proportion is 73%, livestock – 27%. The proportion of production of the main agricultural products in the total volume throughout Ukraine is as follows: sunflower – 10%, grain and leguminous plants – 6.7%, sugar beet (factory) – 5.2%, meat – 3.0%, milk – about 2.8%.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	532	X
TB incidence (new cases + relapses)	466	65,4
of them	370	52,0
TB/HIV	66	9,3
0-14 years old	14	15,2
15-17 years old	2	11,6
Extrapulmonary TB cases	18	2,5
Pulmonary TB cases with laboratory confirmation	286	63,8%
Pulmonary TB cases with clinical diagnosis	162	36,2%
Prevalence	669	93,9
of them	104	14,6
TB/HIV	127	17,8
TB mortality	12	1,7

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	5 125,75	31,9
GF	2 727,79	17,0
Local budget	8 233,36	51,1

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	108	1,5
New cases of MTB+ C+ covered by DST	159	89,3
Cases of MTB+ C+ re-treatment covered by DST	119	88,1
MDR-TB among new cases of MTB+ C+	16	10,1
MDR-TB among MTB+ C+ re-treatment cases	14	11,8

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	130
per 10,000 people	1,83
Number of sanatorium TB beds	50
Average bed stay	125,7
Bed turn-over	2,6
Average number of bed occupancy days	322,6
TB specialists staffing in the civil sector facilities	25/0,35 per 10,000 people

Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	17	0
II	0	-
III	0	-

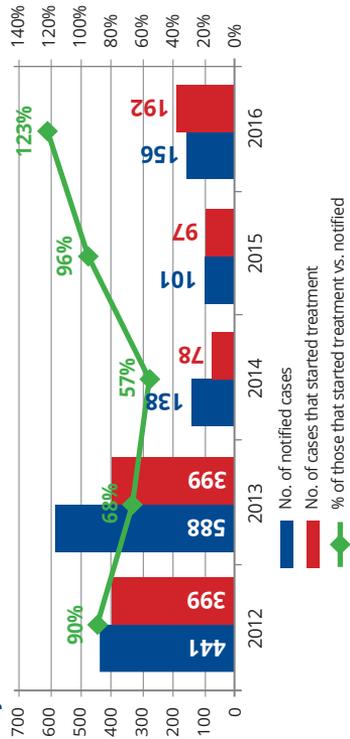
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	594	97,7
TB/HIV + co-trimoxazole	89	78,8
TB/HIV + ART	96	85,0

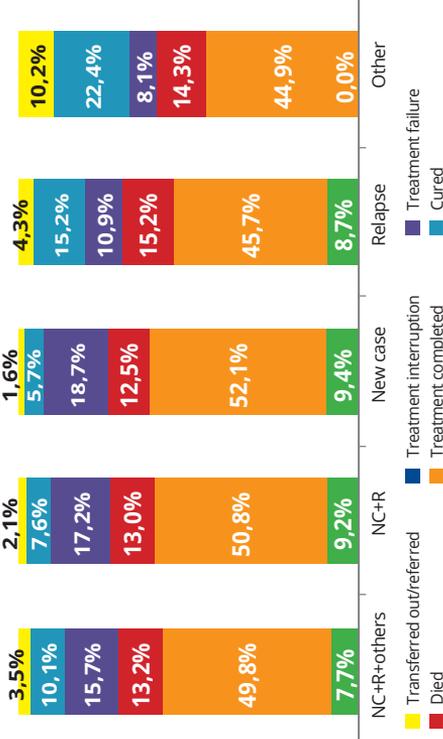
TB incidence (new cases + relapses)



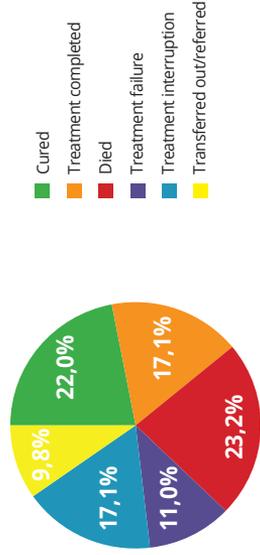
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



LUHANSKA OBLAST

(areas controlled by the Government of Ukraine)

The total population is 712,139

Industry of the region is represented by the coal mining industry, mechanical engineering, chemical, petrochemical, food, wood processing, textile and construction materials industries.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	23 603,20	40,9
GF	9 256,70	16,0
Local budget	24 851,40	43,1
Other	3	0,0

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	505	1,7
New cases of MTB+ C+ covered by DST	665	84,0
Cases of MTB+ C+ re-treatment covered by DST	332	84,5
MDR-TB among new cases of MTB+ C+	95	14,3
MDR-TB among MTB+ C+ re-treatment cases	59	17,8

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	895
per 10,000 people	3,56
Number of sanatorium TB beds	305
Average bed stay	72,0
Bed turn-over	3,8
Average number of bed occupancy days	270,5
TB specialists staffing in the civil sector facilities	179/0,71 per 10,000 people

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	2 069	X
TB incidence (new cases + relapses)	2 012	80,0
of them new cases	1 557	61,9
TB/HIV	218	8,7
0-14 years old	42	10,3
15-17 years old	20	26,5
Extrapulmonary TB cases	157	6,2
Pulmonary TB cases with laboratory confirmation	1 127	63,4%
Pulmonary TB cases with clinical diagnosis	652	36,6%
Prevalence	1 751	69,6
of them TB/HIV	203	8,1
TB mortality	260	10,3
TB/HIV	41	1,6

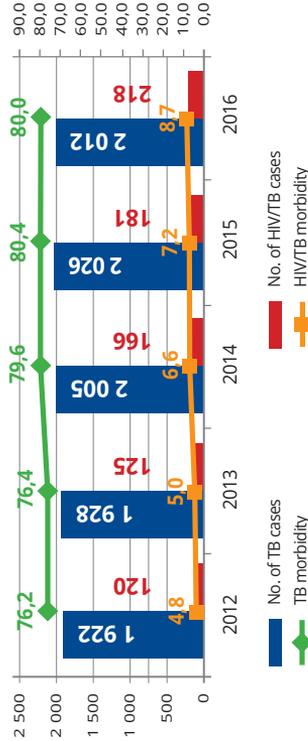
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	40	100
II	6	100
III	1	100

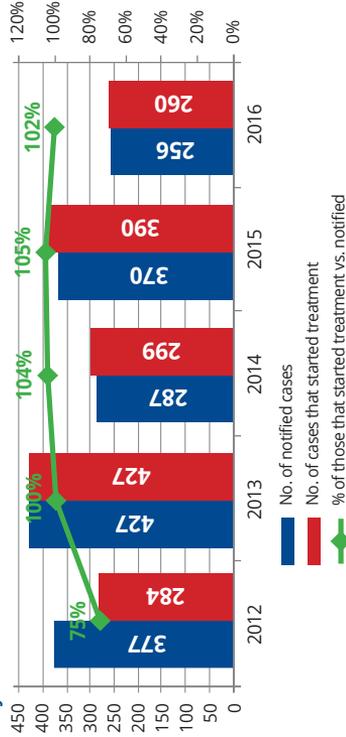
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	2 077	98,7
TB/HIV + co-trimoxazole	178	67,4
TB/HIV + ART	194	74,3

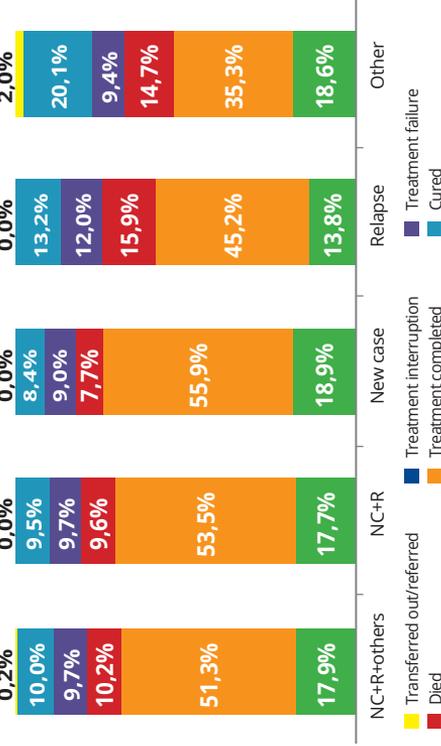
TB incidence (new cases + relapses)



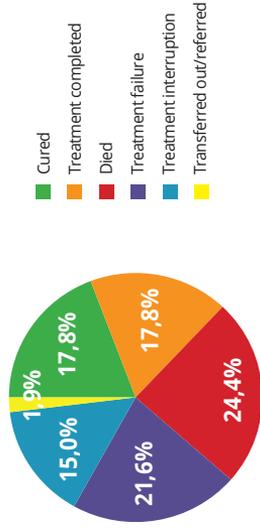
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



LIVSKA OBLAST

The total population is 2,515,804

In the industrial production structure of the region the most important part includes food industry, petrochemical, mechanical engineering and metal processing, power generation. The agricultural sector includes cultivation of cereal crops, potato, vegetables, sugar beet, flax. Meat and dairy cattle, pig and poultry breeding are well developed. A network of sanatoriums and resorts, tourist centers is developed.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 267	X
TB incidence (new cases + relapses)	950	82,1
of them new cases	777	67,1
TB/HIV	279	24,1
0-14 years old	10	5,6
15-17 years old	10	32,9
Extrapulmonary TB cases	73	6,3
Pulmonary TB cases with laboratory confirmation	623	71,9%
Pulmonary TB cases with clinical diagnosis	243	28,1%
Prevalence	1 508	130,3
of them TB/HIV	380	32,8
TB mortality	92	7,9
TB/HIV	115	9,9

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	10 569,22	42,2
GF	10 882,67	43,5
Local budget	3 571,62	14,3
Other	0	0,0

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	263	2,9
New cases of MTB+ C+ covered by DST	446	100
Cases of MTB+ C+ re-treatment covered by DST	382	100
MDR-TB among new cases of MTB+ C+	173	38,8
MDR-TB among MTB+ C+ re-treatment cases	192	50,3

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	499
per 10,000 people	4,34
Number of sanatorium TB beds	201
Average bed stay	112,3
Bed turn-over	2,9
Average number of bed occupancy days	328,5
TB specialists staffing in the civil sector facilities	61/0,53 per 10,000 people

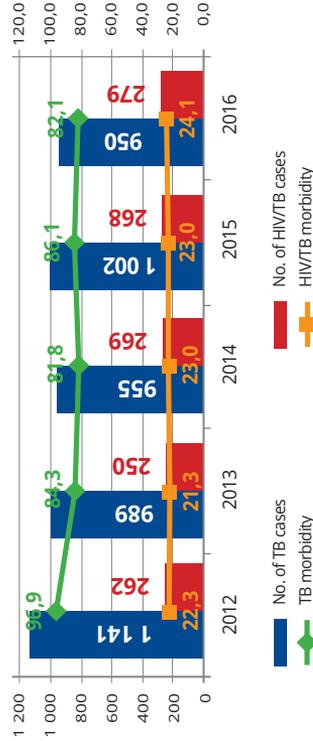
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	30	100
II	0	-
III	1	100

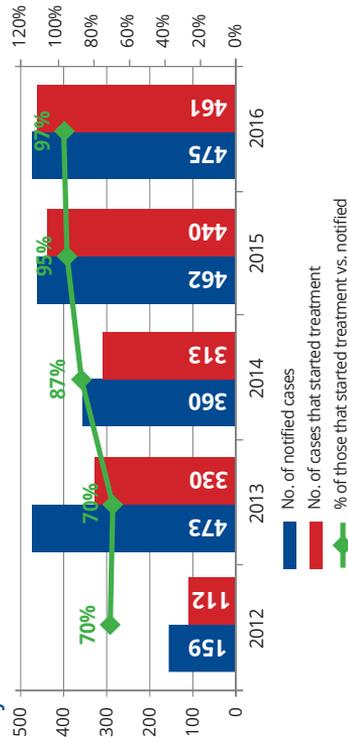
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 489	99,3
TB/HIV + co-trimoxazole	459	83,3
TB/HIV + ART	391	68,8

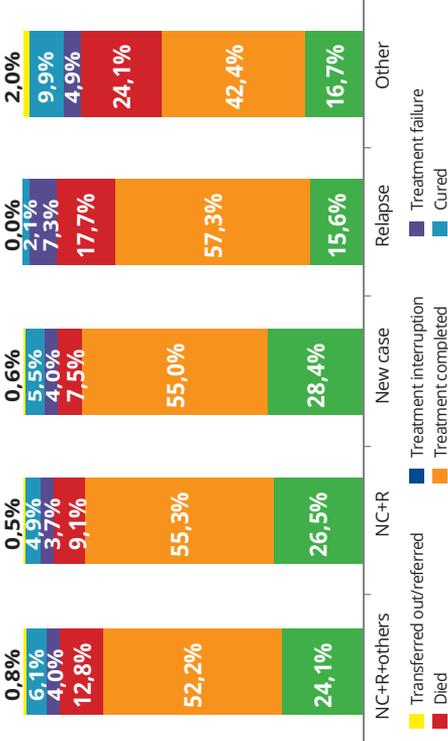
TB incidence (new cases + relapses)



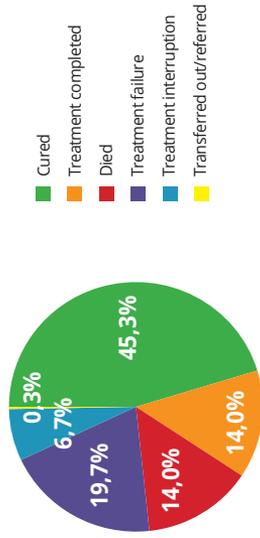
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



MYKOLAIVSKA OBLAST

The total population is 1,157,492

A powerful diversified industry, agriculture, an extensive transport network, ports and significant industrial, scientific and social infrastructures are developed in the oblast. There are three marine ports and one river port in Mykolaiv.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	10 569,22	42,2
GF	10 882,67	43,5
Local budget	3 571,62	14,3
Other	0	0,0

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	263	2,9
New cases of MTB+ C+ covered by DST	446	100
Cases of MTB+ C+ re-treatment covered by DST	382	100
MDR-TB among new cases of MTB+ C+	173	38,8
MDR-TB among MTB+ C+ re-treatment cases	192	50,3

Service resources, 2016

Indicator	Abs. No.
Number of TB beds per 10,000 people	499
Number of sanatorium TB beds	4,34
Average bed stay	201
Bed turn-over	112,3
Average number of bed occupancy days	2,9
TB specialists staffing in the civil sector facilities	328,5
	61/0,53 per 10,000 people

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 267	X
TB incidence (new cases + relapses) of them	950	82,1
new cases	777	67,1
TB/HIV	279	24,1
0-14 years old	10	5,6
15-17 years old	10	32,9
Extrapulmonary TB cases	73	6,3
Pulmonary TB cases with laboratory confirmation	623	71,9%
Pulmonary TB cases with clinical diagnosis	243	28,1%
Prevalence of them	1 508	130,3
TB/HIV	380	32,8
TB mortality	92	7,9
TB/HIV	115	9,9

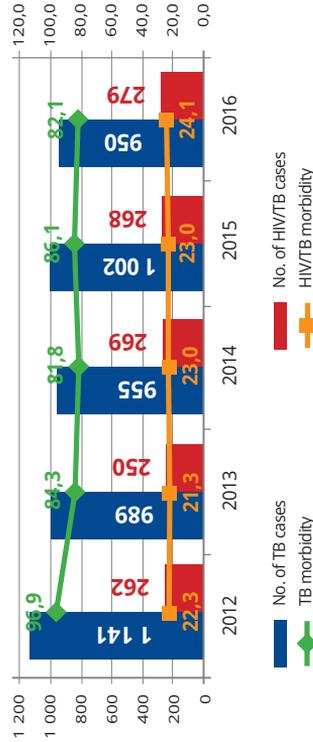
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	30	100
II	0	-
III	1	100

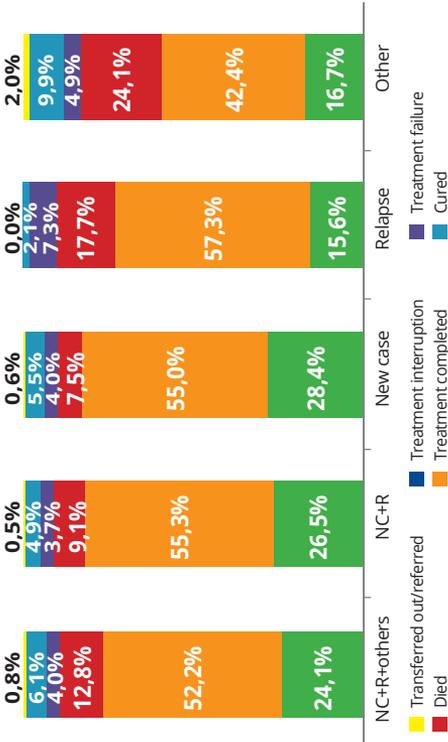
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 489	99,3
TB/HIV + co-trimoxazole	459	83,3
TB/HIV + ART	391	68,8

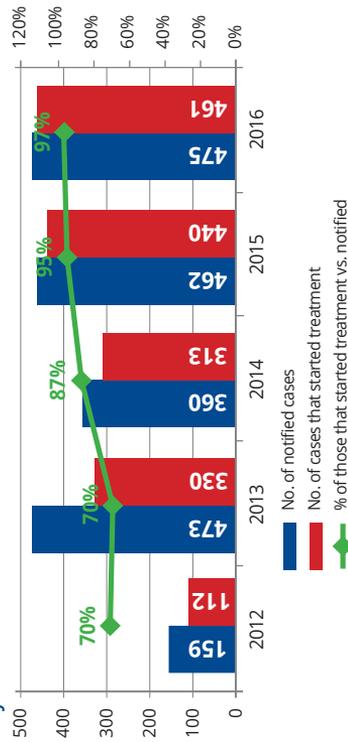
TB incidence (new cases + relapses)



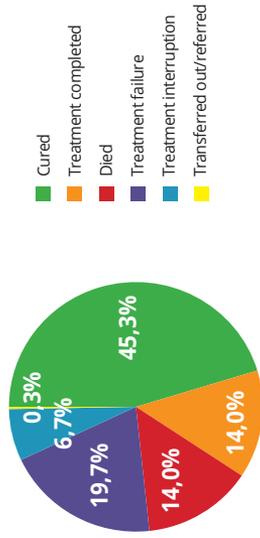
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



ODESKA OBLAST

The total population is 2,379,229

The oblast industry plays a significant role in the structure of the national economy of Ukraine. There are oil refining enterprises, mechanical engineering, machinery repair and assembly, steel-making and metal processing, chemical and petrochemical, food and consumer goods industry in the region.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	15 196,27	28,5
GF	18 741,96	35,2
Local budget	17 582,65	33,0
Other	1 706,24	3,2

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	3 363	X
TB incidence (new cases + relapses)	3 108	130,6
of them new cases	2 594	109,0
TB/HIV	1 139	47,9
0-14 years old	44	11,2
15-17 years old	24	38,5
Extrapulmonary TB cases	271	11,4
Pulmonary TB cases with laboratory confirmation	1 957	69,0%
Pulmonary TB cases with clinical diagnosis	880	31,0%
Prevalence	3 747	157,5
of them TB/HIV	1 151	48,4
TB mortality	316	13,3
TB/HIV	275	11,6

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	262	2,4
New cases of MTB+ C+ covered by DST	1 448	100
Cases of MTB+ C+ re-treatment covered by DST	548	100
MDR-TB among new cases of MTB+ C+	370	25,6
MDR-TB among MTB+ C+ re-treatment cases	247	45,1

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	1 025
per 10,000 people	4,31
Number of sanatorium TB beds	1 720
Average bed stay	97,6
Bed turn-over	3,1
Average number of bed occupancy days	303,2
TB specialists staffing in the civil sector facilities	158/0,67 per 10,000 people

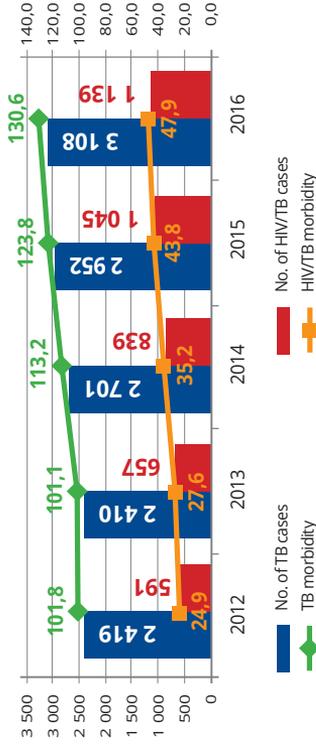
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	46	95,7
II	1	100
III	1	100

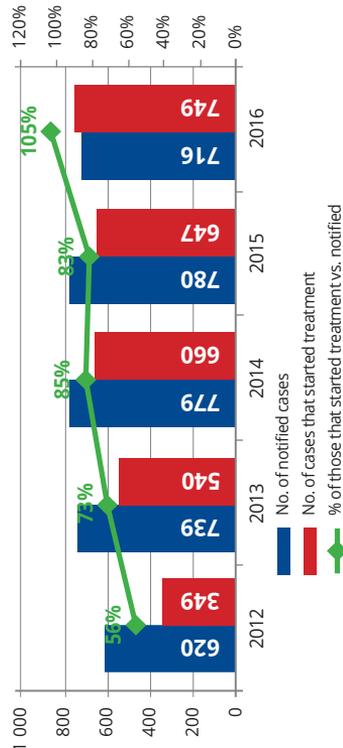
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	3 474	99,8
TB/HIV + co-trimoxazole	1 034	73,1
TB/HIV + ART	974	69,0

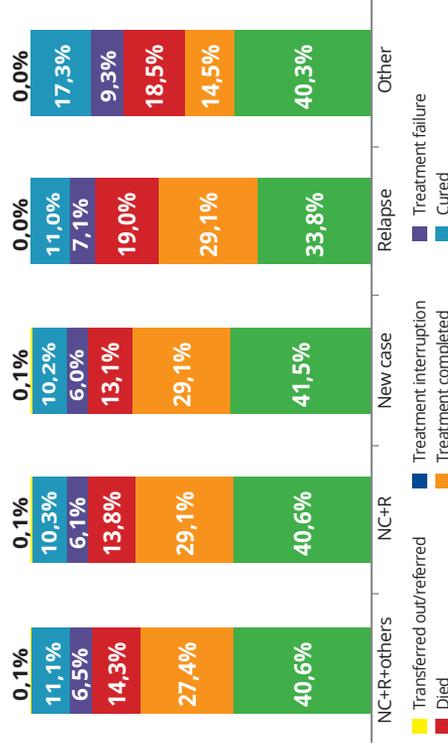
TB incidence (new cases + relapses)



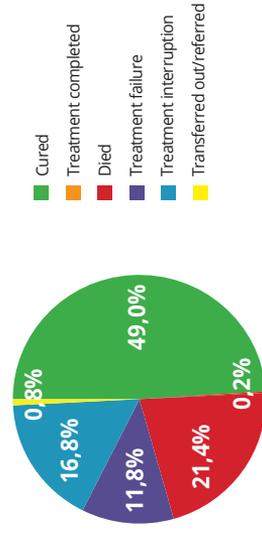
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



POLTAVSKA OBLAST

The total population is 1,434,110

There is a developed grain and livestock production, production of technical crops, mining, automotive, chemical, mechanical engineering, oil refining, food industries in the region. Almost everywhere in the oblast there are oil and gas wells.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	5 992,2	19,6
GF	10 190,50	33,3
Local budget	13 911,70	45,4
Other	551,1	1,8

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	174	1,8
New cases of MTB+ C+ covered by DST	445	98,2
Cases of MTB+ C+ re-treatment covered by DST	209	94,6
MDR-TB among new cases of MTB+ C+	88	19,8
MDR-TB among MTB+ C+ re-treatment cases	100	47,8

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	559
per 10,000 people	3,94
Number of sanatorium TB beds	230
Average bed stay	110,6
Bed turn-over	2,2
Average number of bed occupancy days	240,0
TB specialists staffing in the civil sector facilities	86/0,61 per 10,000 people

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 098	X
TB incidence (new cases + relapses) of them	996	69,6
new cases	799	55,8
TB/HIV	126	8,8
0-14 years old	10	5,0
15-17 years old	4	11,1
Extrapulmonary TB cases	49	3,4
Pulmonary TB cases with laboratory confirmation	623	66,2%
Pulmonary TB cases with clinical diagnosis	318	33,8%
Prevalence	1 263	88,3
of them	151	10,6
TB/HIV	143	10,0
TB mortality	37	2,6

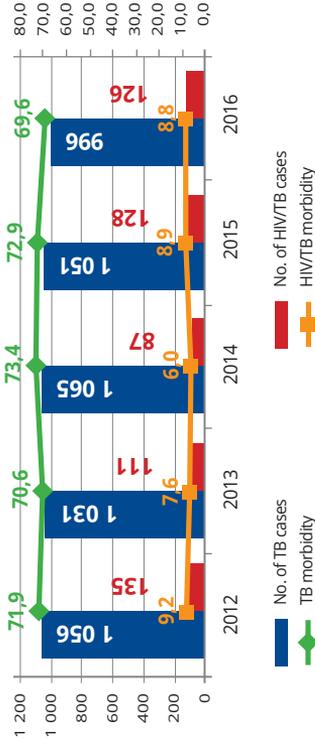
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	31	100
II	3	100
III	1	100

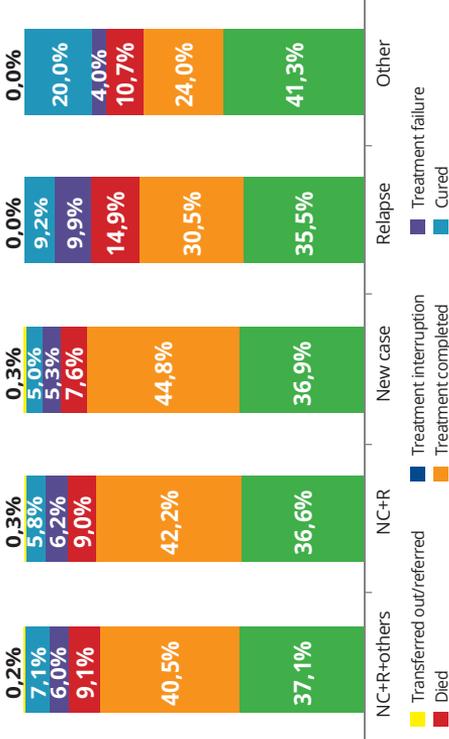
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 108	92,6
TB/HIV + co-trimoxazole	127	71,8
TB/HIV + ART	139	80,8

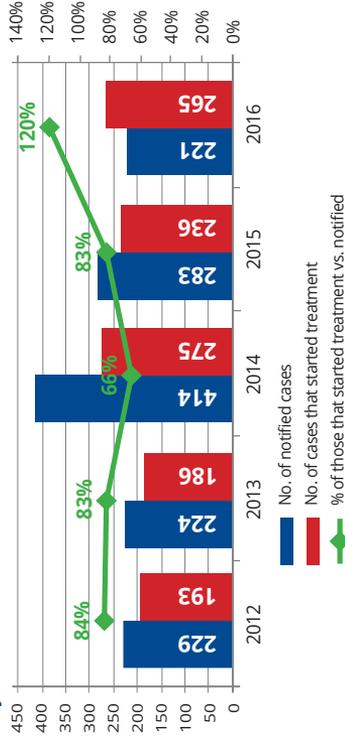
TB incidence (new cases + relapses)



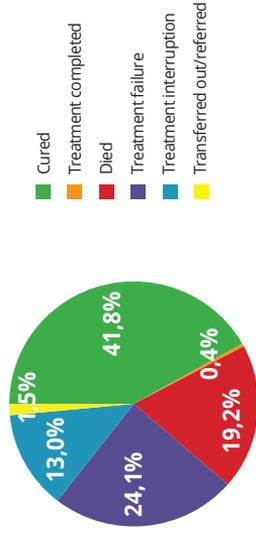
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



RIVNENSKA OBLAST

The total population is 1,160,751

The leading economy branches of the oblast are industry and agriculture. In the all-Ukrainian context, the area is marked by production of fiber slabs, plywood, mineral fertilizers, cement, amber, meat and dairy and agricultural products processing facilities.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	4 798,36	35,3
GF	4 279,90	31,5
Local budget	4 119,70	30,3
Other	402,6	3,0

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	807	X
TB incidence (new cases + relapses)	772	66,5
of them	611	52,6
TB/HIV	60	5,2
0-14 years old	16	6,8
15-17 years old	5	12,1
Extrapulmonary TB cases	83	7,2
Pulmonary TB cases with laboratory confirmation	518	75,3%
Pulmonary TB cases with clinical diagnosis	170	24,7%
Prevalence	942	81,2
of them	60	5,2
TB mortality	100	8,6
TB/HIV	10	0,9

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	135	2,7
New cases of MTB+ C+ covered by DST	367	98,7
Cases of MTB+ C+ re-treatment covered by DST	137	93,8
MDR-TB among new cases of MTB+ C+	38	10,4
MDR-TB among MTB+ C+ re-treatment cases	42	30,7

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	500
per 10,000 people	4,3
Number of sanatorium TB beds	165
Average bed stay	86,1
Bed turn-over	2,4
Average number of bed occupancy days	202,3
TB specialists staffing in the civil sector facilities	65/0,56 per 10,000 people

Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	20	100
II	2	100
III	1	100

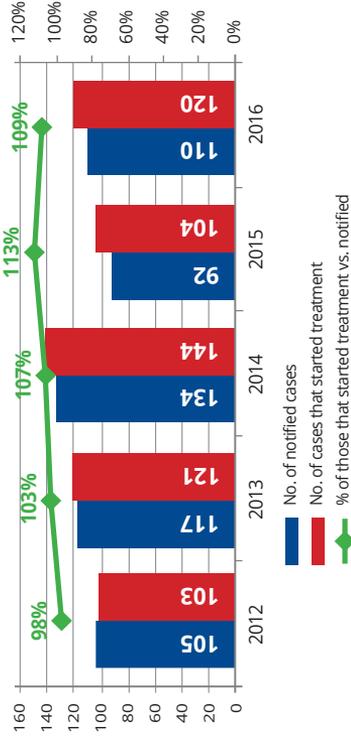
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	807	99,5
TB/HIV + co-trimoxazole	61	75,3
TB/HIV + ART	54	69,2

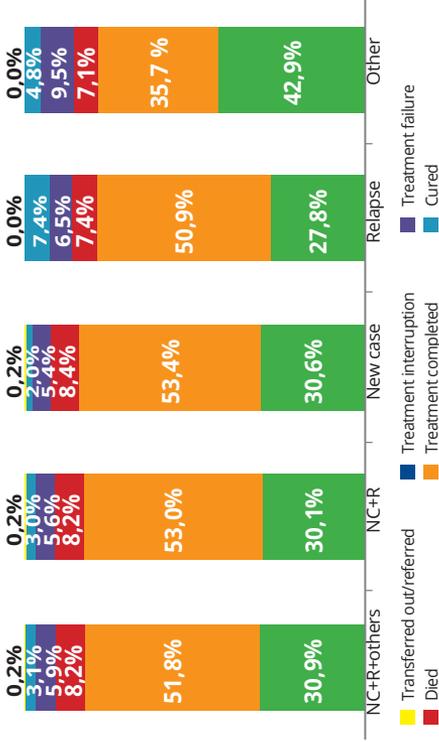
TB incidence (new cases + relapses)



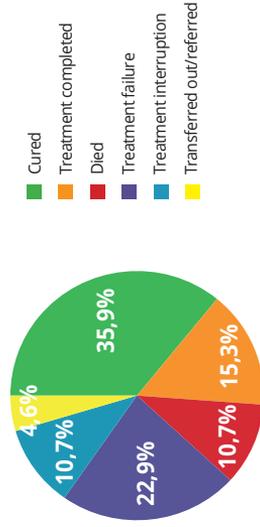
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



SUMSKA OBLAST

The total population is 1,111,064

The oblast is an industrial and agricultural region of Ukraine. The industrial specialization of the oblast is connected with extraction of energy resources, development of mechanical engineering, chemical and petrochemical industry, processing industries of agriculture. Agriculture is represented by crops growing (processing of grain crops, potato, sugar beet, other industrial crops) and livestock production.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	6 424,0	30,3
GF	6 117,70	28,9
Local budget	8 655,60	40,8
Other	0,0	0,0

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	232	2,7
New cases of MTB+ C+ covered by DST	399	96,8
Cases of MTB+ C+ re-treatment covered by DST	167	91,3
MDR-TB among new cases of MTB+ C+	64	16,0
MDR-TB among MTB+ C+ re-treatment cases	55	32,9

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	335
per 10,000 people	3,04
Number of sanatorium TB beds	110
Average bed stay	80,1
Bed turn-over	2,4
Average number of bed occupancy days	189,4
TB specialists staffing in the civil sector facilities	63/0,57 per 10,000 people

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	841	X
TB incidence (new cases + relapses)	800	72,0
of them new cases	615	55,4
TB/HIV	78	7,0
0-14 years old	16	11,0
15-17 years old	8	28,4
Extrapulmonary TB cases	77	6,9
Pulmonary TB cases with laboratory confirmation	580	80,2%
Pulmonary TB cases with clinical diagnosis	143	19,8%
Prevalence	827	74,4
of them TB/HIV	59	5,3
TB mortality	116	10,4
TB/HIV	11	1,0

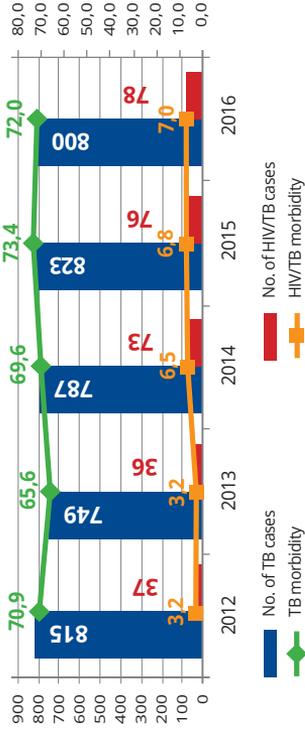
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	27	100
II	3	100
III	1	100

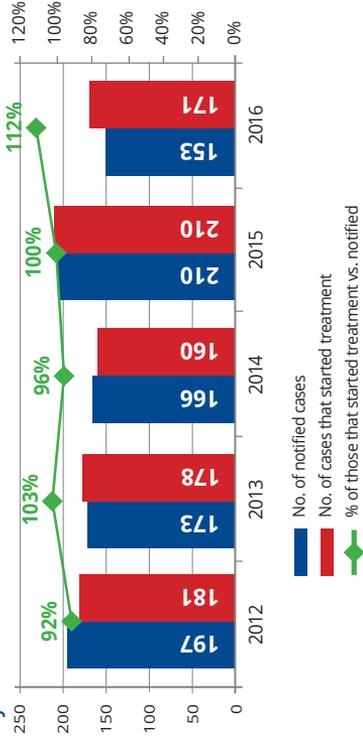
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	857	99,5
TB/HIV + co-trimoxazole	102	97,1
TB/HIV + ART	68	70,8

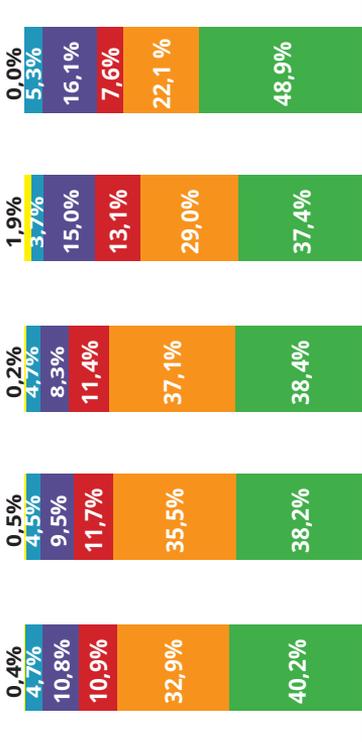
TB incidence (new cases + relapses)



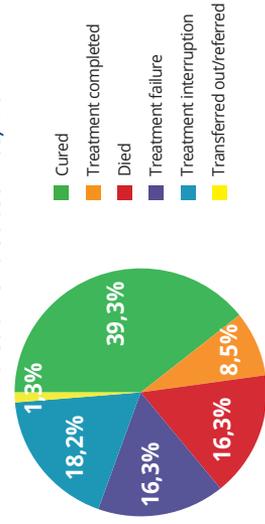
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



TERNOPILSKA OBLAST

The total population is 1,062,458

The prevailing production activities are agriculture and industry (food industry, consumer goods industry, mechanical engineering, etc.).

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	3 194,80	41,5
GF	1 506,50	19,6
Local budget	2 450,00	31,8
Other	545,2	7,1

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	624	X
TB incidence (new cases + relapses)	608	57,2
of them	475	44,7
new cases		
TB/HIV	42	4,0
0-14 years old	4	2,4
15-17 years old	4	12,2
Extrapulmonary TB cases	59	5,6
Pulmonary TB cases with laboratory confirmation	367	67,0%
Pulmonary TB cases with clinical diagnosis	181	33,0%
Prevalence	619	58,3
of them	39	3,7
TB/HIV	64	6,0
TB mortality	8	0,8
TB/HIV		

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	97	1,4
New cases of MTB+ C+ covered by DST	253	100
Cases of MTB+ C+ re-treatment covered by DST	117	100
MDR-TB among new cases of MTB+ C+	39	15,4
MDR-TB among MTB+ C+ re-treatment cases	42	35,9

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	365
per 10,000 people	3,46
Number of sanatorium TB beds	130
Average bed stay	68,9
Bed turn-over	4,8
Average number of bed occupancy days	327,4
TB specialists staffing in the civil sector facilities	73/0,69 per 10,000 people

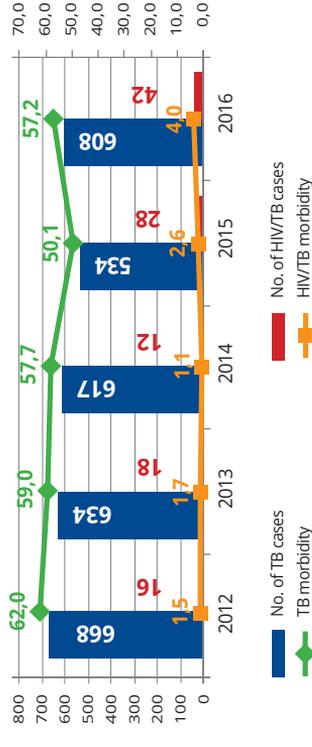
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	23	100
II	4	100
III	1	100

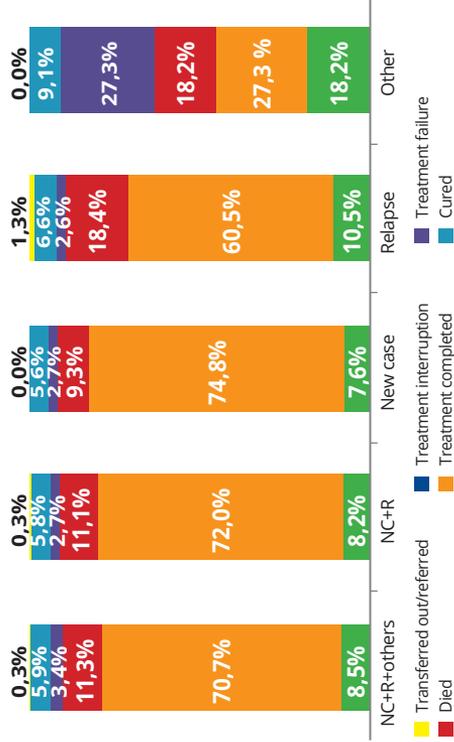
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	649	94,9
TB/HIV + co-trimoxazole	52	74,3
TB/HIV + ART	49	72,1

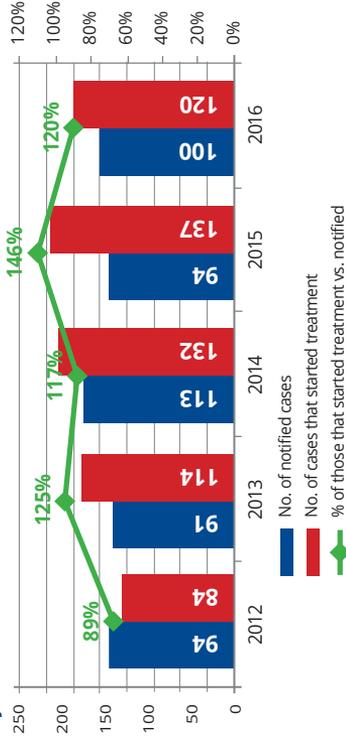
TB incidence (new cases + relapses)



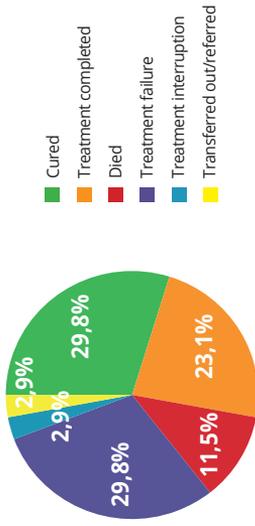
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



KHARKIVSKA OBLAST

The total population is 2,702,980

The oblast is characterized by the industry high-level specialization and concentration, where an integrated complex of power engineering, electrical engineering, transport and agricultural engineering, chemical industry and construction materials production is developed. Consumer goods industry, food and processing industries are well developed.

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 476	X
TB incidence (new cases + relapses)	1 419	52,5
of them	1 163	43,0
TB/HIV	92	3,4
0-14 years old	23	6,3
15-17 years old	12	19,5
Extrapulmonary TB cases	93	3,4
Pulmonary TB cases with laboratory confirmation	1 047	79,8%
Pulmonary TB cases with clinical diagnosis	265	20,2%
Prevalence	1 768	65,4
of them	114	4,2
TB/HIV	256	9,5
TB mortality	35	1,3
TB/HIV		

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	7 499,00	19,5
GF	12 623,10	32,9
Local budget	17 833,80	46,4
Other	442	1,2

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	301	2,3
New cases of MTB+ C+ covered by DST	660	90,0
Cases of MTB+ C+ re-treatment covered by DST	269	78,0
MDR-TB among new cases of MTB+ C+	197	29,8
MDR-TB among MTB+ C+ re-treatment cases	146	54,3

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	7200
per 10,000 people	2,68
Number of sanatorium TB beds	440
Average bed stay	83,2
Bed turn-over	3,0
Average number of bed occupancy days	245,2
TB specialists staffing in the civil sector facilities	162/0,60 per 10,000 people

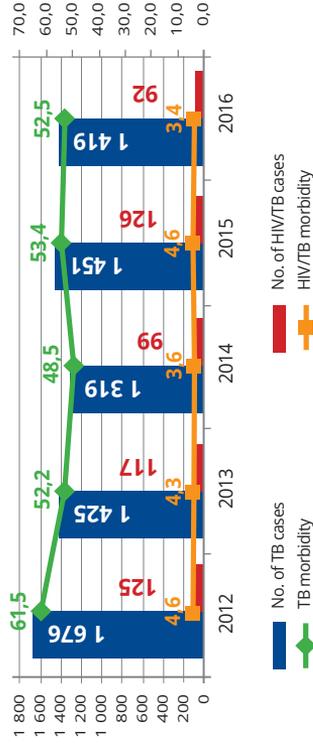
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	40	100
II	5	100
III	1	100

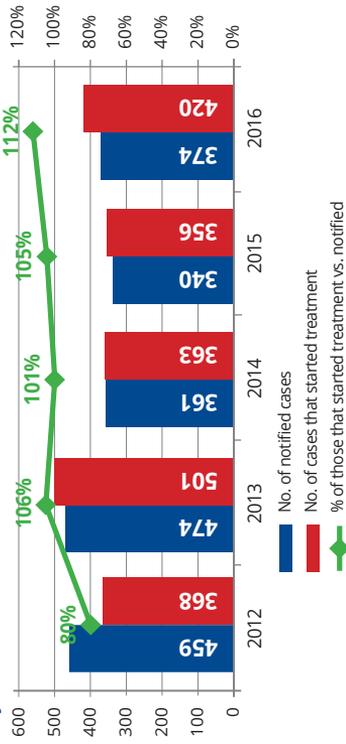
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 688	96,3
TB/HIV + co-trimoxazole	114	66,3
TB/HIV + ART	119	69,6

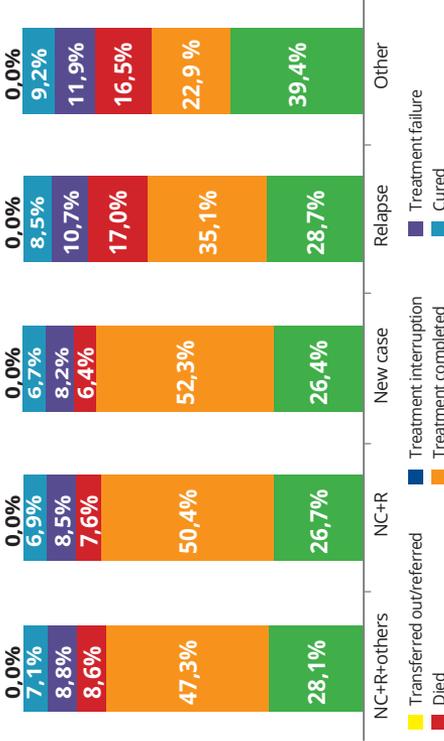
TB incidence (new cases + relapses)



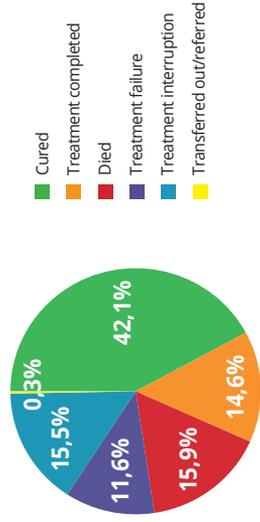
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



KHERSONSKA OBLAST

The total population is 1,060,924

This region is a unique natural system with the access to the Azov and Black Seas, as well as the Dnipro waterway. Agriculture belongs to the leading branches of the oblast's economy.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	4 378,02	12,6
GF	20 563,40	59,4
Local budget	8 716,00	25,2
Other	956,19	2,8

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	1 066	X
TB incidence (new cases + relapses)	1 051	99,1
of them	799	75,3
new cases	208	19,6
TB/HIV	22	13,1
0-14 years old	12	41,1
15-17 years old	77	7,3
Extrapulmonary TB cases	809	83,1%
Pulmonary TB cases with laboratory confirmation	165	16,9%
Pulmonary TB cases with clinical diagnosis	1 220	115,0
Prevalence	188	17,7
of them	156	14,7
TB/HIV	63	5,9
TB mortality		
TB/HIV		

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	207	5,0
New cases of MTB+ C+ covered by DST	502	100
Cases of MTB+ C+ re-treatment covered by DST	257	100
MDR-TB among new cases of MTB+ C+	153	30,5
MDR-TB among MTB+ C+ re-treatment cases	129	50,2

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	620
per 10,000 people	5,88
Number of sanatorium TB beds	65
Average bed stay	94,9
Bed turn-over	3,5
Average number of bed occupancy days	327,4
TB specialists staffing in the civil sector facilities	58/0,55 per 10,000 people

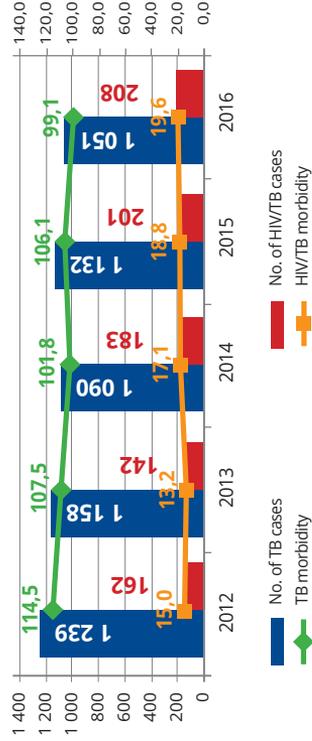
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	24	100
II	3	100
III	1	100

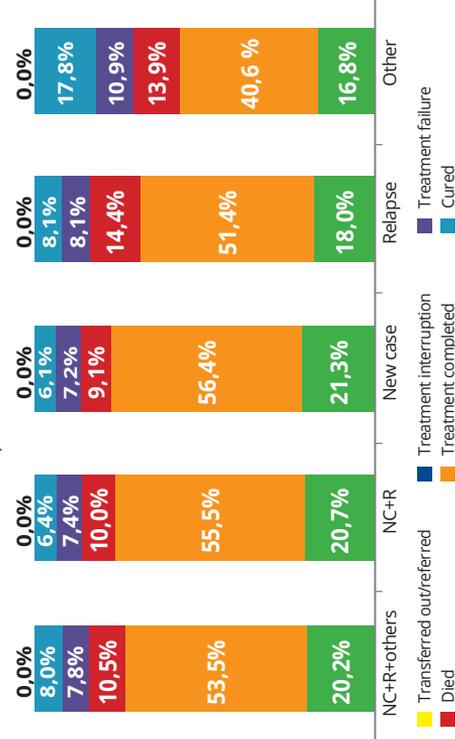
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	1 348	98,2
TB/HIV + co-trimoxazole	242	80,9
TB/HIV + ART	178	59,9

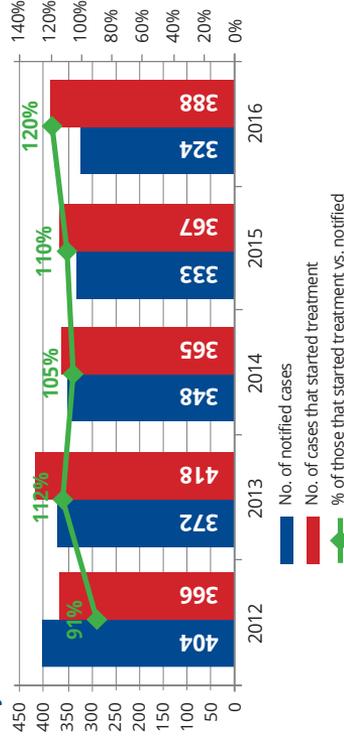
TB incidence (new cases + relapses)



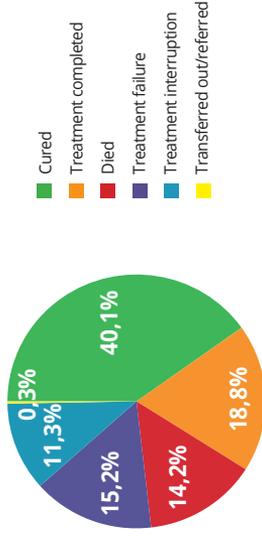
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014



KHMELNYTSKA OBLAST

The total population is 1,060,924

The leading place is taken by mechanical engineering and metal processing, food industry, consumer goods industry, forestry, wood processing, power generation industry. The champion among agricultural branches in the oblast is crop production.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	6 395,20	23,9
GF	6 969,11	26,1
Local budget	13 338,26	49,9
Other	44,13	0,2

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	975	X
TB incidence (new cases + relapses)	881	68,2
of them	690	53,4
new cases	98	7,6
TB/HIV	9	4,4
0-14-years old	11	30,2
15-17-years old	96	7,4
Extrapulmonary TB cases		
Pulmonary TB cases with laboratory confirmation	480	61,6%
Pulmonary TB cases with clinical diagnosis	299	38,4%
Prevalence	812	62,9,
of them	99	7,7
TB/HIV	96	7,4
TB mortality	18	1,4
TB/HIV		

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	148	2,7
New cases of MTB+ C+ covered by DST	331	100
Cases of MTB+ C+ re-treatment covered by DST	155	100
MDR-TB among new cases of MTB+ C+	58	17,5
MDR-TB among MTB+ C+ re-treatment cases	72	46,5

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	305
per 10,000 people	2,38
Number of sanatorium TB beds	110
Average bed stay	92,9
Bed turn-over	3,0
Average number of bed occupancy days	278,4
TB specialists staffing in the civil sector facilities	82/0,64 per 10,000 people

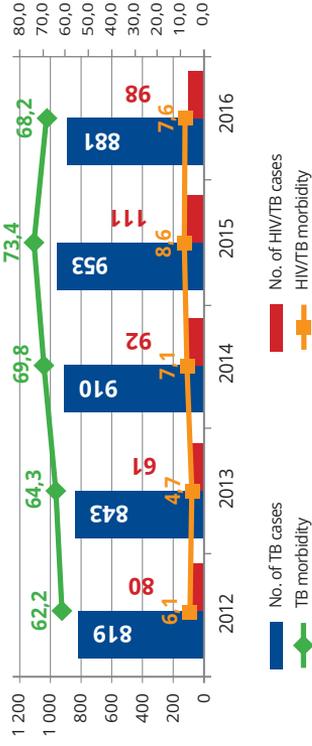
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	24	100
II	2	100
III	1	100

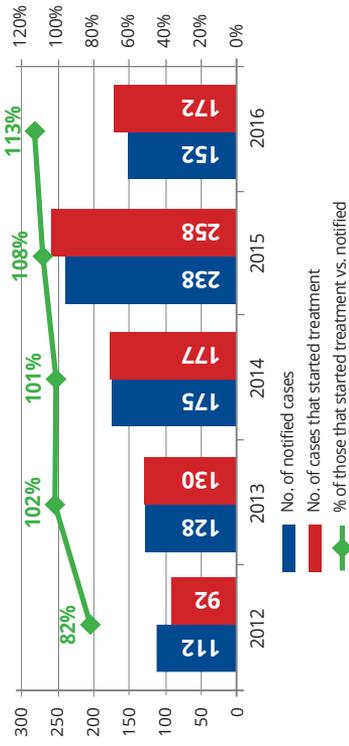
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	968	94,3
TB/HIV + co-trimoxazole	93	65,0
TB/HIV + ART	94	66,2

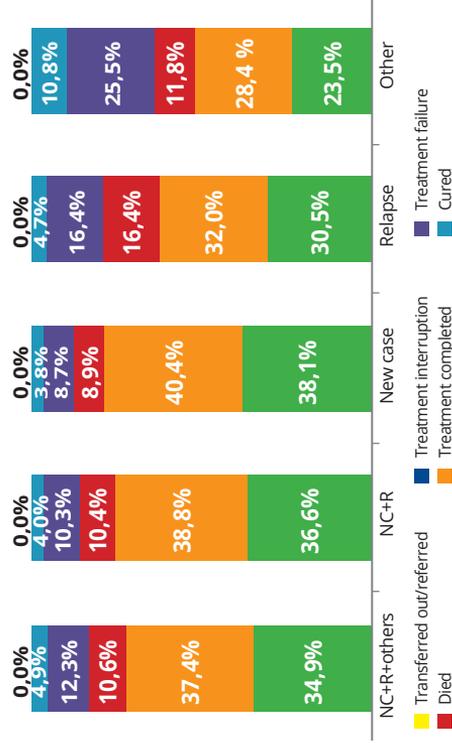
TB incidence (new cases + relapses)



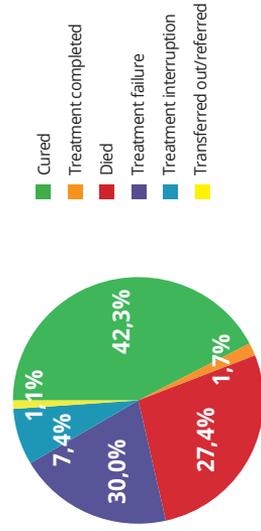
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



CHERKASKA OBLAST

The total population is 1,239,336

The prevailing industry is agriculture.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	5 895,54	20,7
GF	10 444,18	36,6
Local budget	12 172,30	42,6
Other	30,9	0,1

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	922	X
TB incidence (new cases + relapses)	826	66,6
of them	654	52,8
new cases	202	16,3
TB/HIV		
0-14 years old	21	12,2
15-17 years old	12	37,4
Extrapulmonary TB cases	149	12,0
Pulmonary TB cases with laboratory confirmation	497	75,0%
Pulmonary TB cases with clinical diagnosis	166	25,0%
Prevalence	997	80,4
of them	207	16,7
TB/HIV		
TB mortality	113	9,1
TB/HIV	51	4,1

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	155	2,9
New cases of MTB+ C+ covered by DST	371	99,7
Cases of MTB+ C+ re-treatment covered by DST	199	100
MDR-TB among new cases of MTB+ C+	93	25,1
MDR-TB among MTB+ C+ re-treatment cases	91	45,7

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	480
per 10,000 people	3,91
Number of sanatorium TB beds	160
Average bed stay	93,8
Bed turn-over	3,3
Average number of bed occupancy days	313,1
TB specialists staffing in the civil sector facilities	53/0,43 per 10,000 people

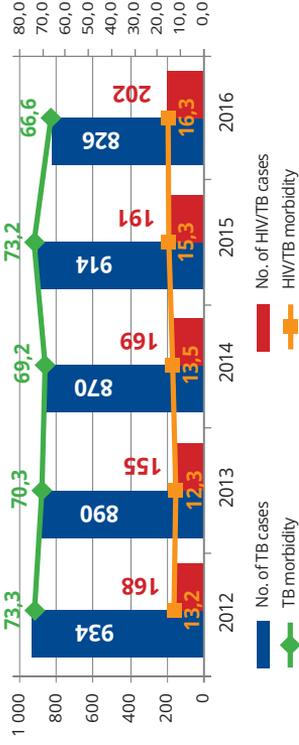
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	27	92,6
II	0	-
III	1	0

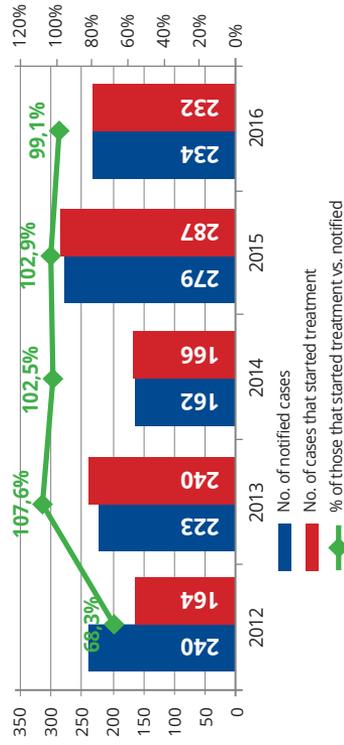
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	952	99,4
TB/HIV + co-trimoxazole	228	90,1
TB/HIV + ART	165	68,8

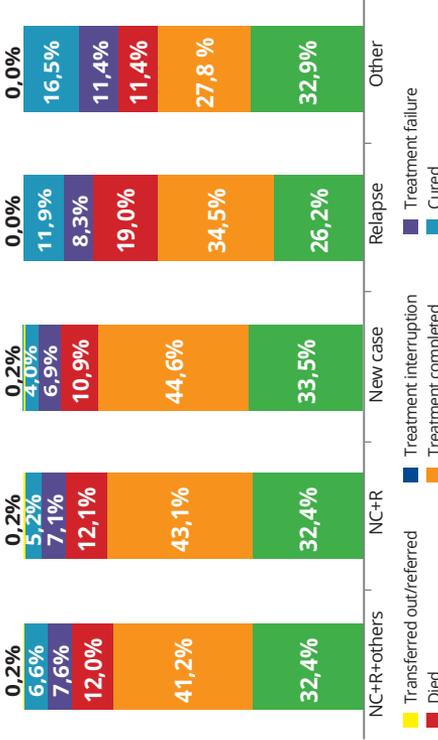
TB incidence (new cases + relapses)



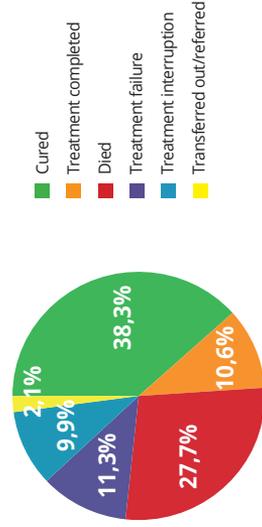
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



CHERNIVETSKA OBLAST

The total population is 906,828

The leading industries of the oblast economy are mechanical engineering, consumer goods industry, food industry, forestry, wood processing and agriculture.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	4 019,20	30,0
GF	2 863,9	21,4
Local budget	5 547,0	41,4
Other	978,5	7,3

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	419	X
TB incidence (new cases + relapses)	361	39,8
of them	273	30,1
new cases	21	2,3
TB/HIV	4	2,6
0-14 years old	3	10,0
15-17 years old	30	3,3
Extrapulmonary TB cases		
Pulmonary TB cases with laboratory confirmation	274	83,8%
Pulmonary TB cases with clinical diagnosis	53	16,2%
Prevalence	547	60,3
of them	34	3,7
TB/HIV	70	7,7
TB mortality	4	0,4
TB/HIV		

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	225	1,7
New cases of MTB+ C+ covered by DST	206	100
Cases of MTB+ C+ re-treatment covered by DST	125	100
MDR-TB among new cases of MTB+ C+	16	7,8
MDR-TB among MTB+ C+ re-treatment cases	14	11,2

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	260
per 10,000 people	2,87
Number of sanatorium TB beds	267
Average bed stay	100,5
Bed turn-over	2,16
Average number of bed occupancy days	217,4
TB specialists staffing in the civil sector facilities	67/0,74 per 10,000 people

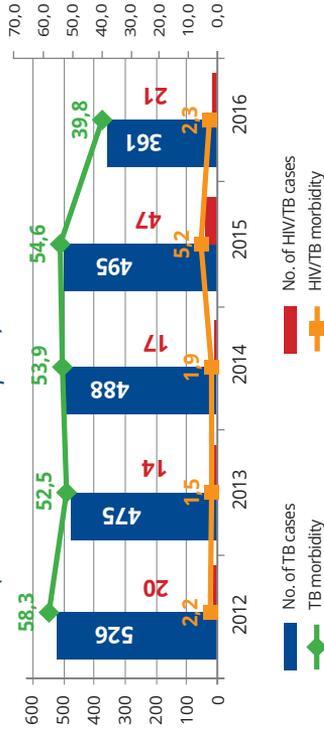
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	11	100
II	2	100
III	1	100

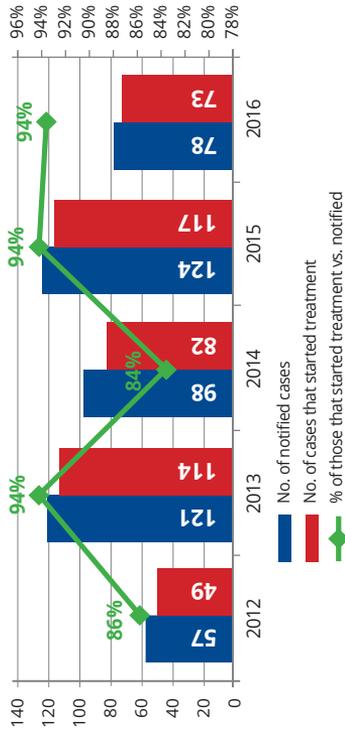
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	403	96,0
TB/HIV + co-trimoxazole	26	89,7
TB/HIV + ART	25	86,2

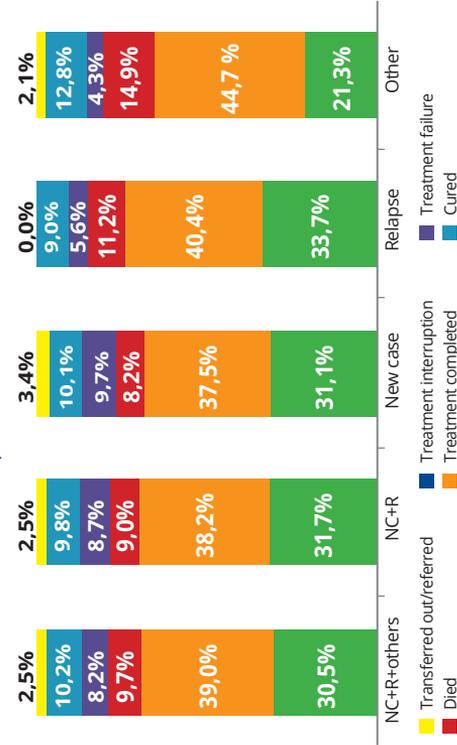
TB incidence (new cases + relapses)



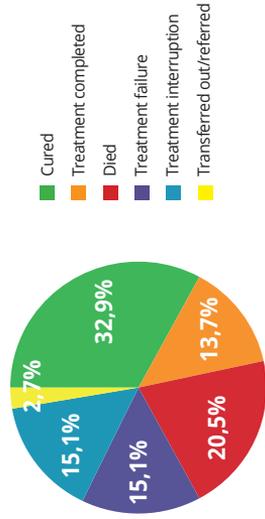
Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



TB treatment outcomes, 2015



Rif-TB/MDR-TB treatment outcomes, 2014



CHERNIHIVSKA OBLAST

The total population is 1,036,433

The oblast has an industrial and agrarian structure of the economy. The priority industries are food, petrochemical, mechanical engineering, metal processing, wood processing, pulp and paper, and consumer goods industries.

TB Program financing, 2016

Source of funding	Total, thousand UAH	%
MOH	4 795,80	22,7
GF	6 098,50	28,9
Local budget	9 908,98	46,9
Other	306,29	1,5

TB epidemiological indicators, 2016

Indicator	Abs. No.	Per 100,000 pop.
Notified TB cases	949	X
TB incidence (new cases + relapses)	865	83,5
of them	656	63,3
new cases	158	15,2
TB/HIV	14	10,0
0-14 years old	7	27,7
15-17 years old	72	6,9
Extrapulmonary TB cases		
Pulmonary TB cases with laboratory confirmation	582	73,4%
Pulmonary TB cases with clinical diagnosis	211	26,6%
Prevalence	1 000	96,5
of them	197	19,0
TB/HIV	104	10,0
TB mortality	51	4,9
TB/HIV		

TB laboratory diagnostics, 2016

Indicator	Abs. No.	%
Detection of TB cases with AFB+ at primary care facilities	159	4,6
New cases of MTB+ C+ covered by DST	420	95,2
Cases of MTB+ C+ re-treatment covered by DST	154	77,4
MDR-TB among new cases of MTB+ C+	89	21,2
MDR-TB among MTB+ C+ re-treatment cases	79	51,3

Service resources, 2016

Indicator	Abs. No.
Number of TB beds	545
per 10,000 people	5,32
Number of sanatorium TB beds	100
Average bed stay	90,1
Bed turn-over	3,1
Average number of bed occupancy days	280,4
TB specialists staffing in the civil sector facilities	63/0,61 per 10,000 people

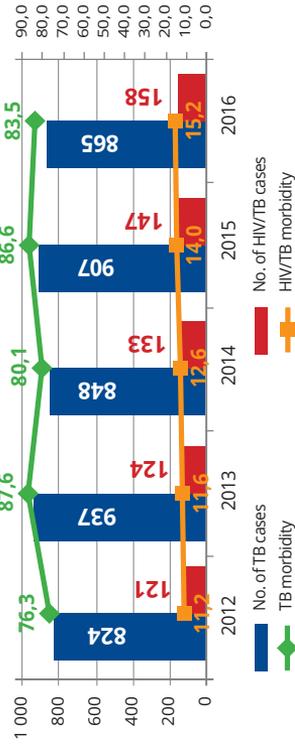
Laboratory service (civil sector), 2016

Laboratory level	Abs. No.	% that passed EQC
I	29	96,6
II	3	100
III	1	100

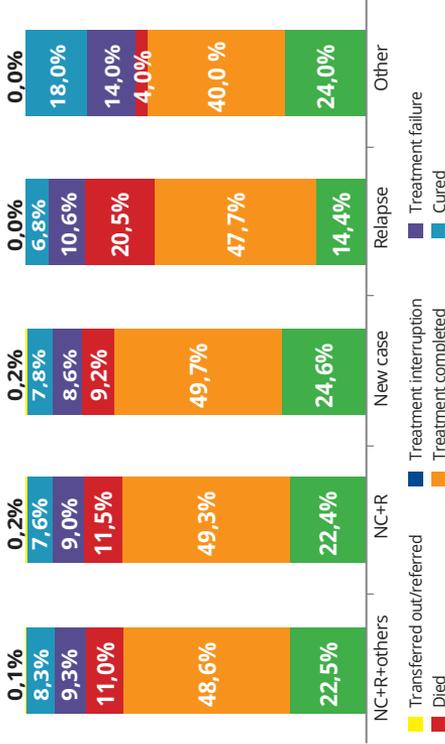
TB/HIV, 2016

Indicator	Abs. No.	%
TB cases with known HIV status	974	94,5
TB/HIV + co-trimoxazole	177	81,9
TB/HIV + ART	185	83,7

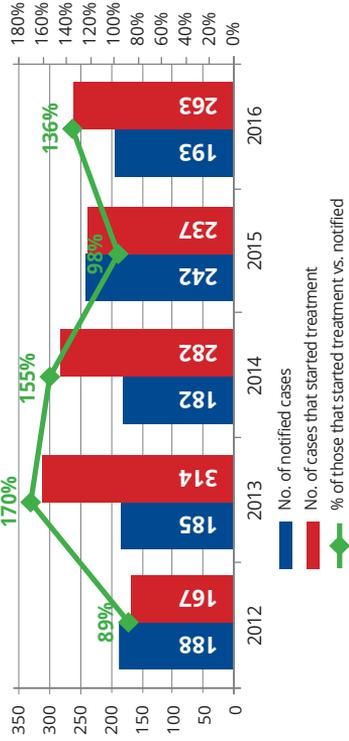
TB incidence (new cases + relapses)



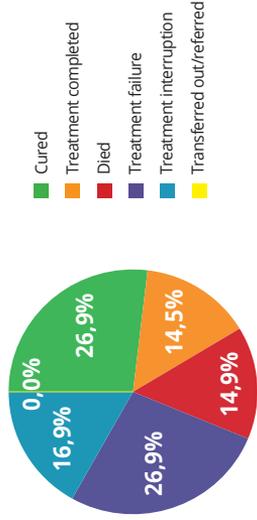
TB treatment outcomes, 2015



Number of TB patients with the diagnosis Newly confirmed MDR or XDR-TB cases and the number of MDR or XDR-TB cases that started treatment



Rif-TB/MDR-TB treatment outcomes, 2014





**PUBLIC HEALTH CENTER
OF THE MOH OF UKRAINE**

Tuberculosis in Ukraine

Analytical and Statistical Reference Book

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