



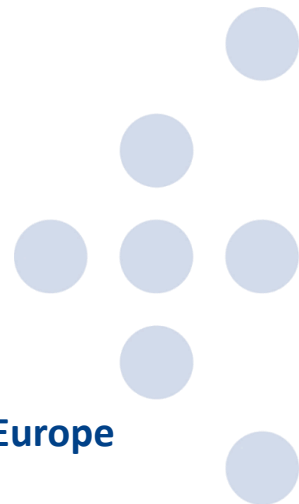
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# **EXTENDING TUBERCULOSIS SERVICES TO WAR-AFFECTED POPULATIONS: INSIGHTS FROM UKRAINE**

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**4<sup>th</sup> webinar of the Virtual Medical Consilium of the WHO Regional Office for Europe  
08 December 2023**



# TB CONTEXT IN UKRAINE

Ukraine is a **high WHO priority country** for drug-resistant TB, with one of the world's highest rates of drug-resistant TB

Over **4 000** people with RIF/MDR-TB or **25** per 100,000, of which **25%** are new cases and **37%** are pre-treated patients

WHO estimated burden of Rif/MDR-TB - **11 000 cases** (6 800 -15 000)

The **full-scale war against Ukraine began on February 24, 2022 and continues 653 days**

The **country's level of economic development is below average**, and the full-scale war against Ukraine will deteriorate the problem of TB

According to the International Organization for Migration, over **10 million** people became **forced migrants**

Due to the war, economic crisis, increased migration, infrastructure damage, and lack of workforce capacity, **there is a high risk of delaying strategic goals of ending TB**



Civilian casualties continue to rise:

- **9,806** killed and **17,962** injured
- **555** children killed and
- **1,186** children injured

OHCHR: October 8<sup>th</sup>, 2023



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# HEALTHCARE CHALLENGES ASSOCIATED WITH A WAR

**Destruction of Healthcare Facilities:** The conflict has led to the destruction of more than 1,600 healthcare facilities, significantly impacting the healthcare infrastructure. According to estimates by the Ministry of Health, Ukraine will need from 14.6 to 20 billion Euros to rebuild the health care system

Out of 25 TB centers, **15 suffered varying degrees of damage due to military aggression by Russia**. 4 facilities are located in the temporarily occupied territories, and 2 facilities do not provide comprehensive TB care. 1 facility located in the temporarily occupied territory of Luhansk had to be evacuated to another region

**Temporary Occupation:** Approximately 17% of Ukraine's territory is currently under temporary occupation, which hampers access to healthcare services for the affected population

**Active Hostilities on Ukrainian Territory:** The ongoing hostilities within Ukraine's borders add to the complexity of delivering healthcare services effectively

**Migration Processes:** The conflict has triggered significant migration processes, with approximately 5.8 million Ukrainians moving abroad, and 5 million individuals becoming internally displaced persons. These movements put additional strain on healthcare services

**Limited public funding due to military-related expenditures**







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## **ADDITIONAL CHALLENGES ASSOCIATED WITH A WAR**

**Difficulties in TB detection and diagnosis:** limited access due to poor transport links, destroyed bridges, healthcare facilities, constant rocket attacks, fuel shortages

**Difficulties in the logistics of TB drugs and symptomatic medicines:** in the areas of active hostilities, over 500 pharmacies were destroyed

**Delays in inpatient care** due to the inability of people to get to their place of residence or in case their homes were destroyed

**Destruction of basic infrastructure** (problems with electricity, water supply, sewerage, lack of telephone communication and Internet access)

**Interruptions in internet and mobile communications** due to the destruction/damage of power supply infrastructure

**Problems with transporting healthcare workers to work** due to unstable transport links and hostile shelling. Sometimes, doctors had to stay in the hospital for a certain period of time with people who have TB

**Lack of protective equipment for healthcare workers** during shelling, hospital shelters often do not meet the proper requirements

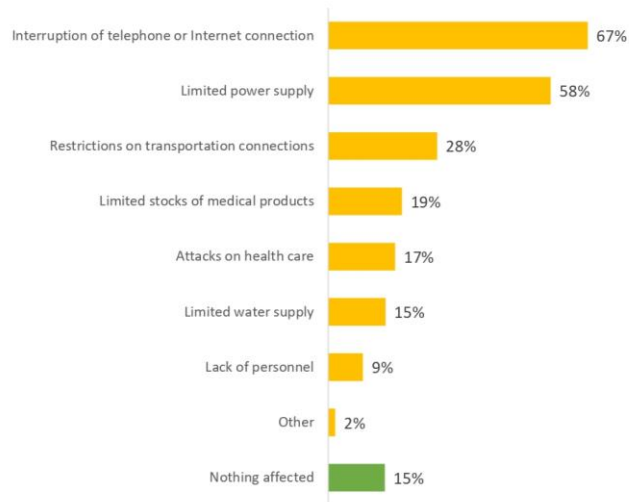
**Overload and exhaustion of medical staff:** increase in the volume of medical services provided due to the large number of internally displaced persons, additional workload for treatment of wounds and burns

**Restoration of mental health:** according to international experts, more than 15 million people will need mental health rehabilitation after the end of the war against Ukraine



# SURVEY RESULTS OF MEDICAL FACILITIES REGARDING KEY BARRIERS DURING WAR

**Key barriers that hinder** successful interventions/service delivery are related to problems with phone or Internet connection and with electricity.



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Kyiv stays without electricity due to the destruction of the power supply infrastructure by the enemy



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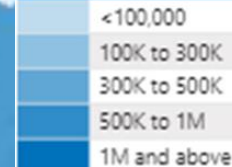
# GLOBAL IMPACT OF THE HUMANITARIAN CRISIS

**5,831,200**

**REFUGEES FROM UKRAINE ARE RECORDED  
ACROSS EUROPE**

IT IS IMPORTANT TO SHARE DATA THROUGH THE  
PLATFORM CREATED BY WHO

Refugees from Ukraine  
recorded by country



<https://data.unhcr.org/en/situations/ukraine>



# STRATEGIC RISK MANAGEMENT

**The National Action Plan** for the provision of medical care to people with TB in the context of war on the first day of full-scale war was implemented

Plans were developed **to evacuate patients** in case the russian army seized the territory, and Médecins Sans Frontières, with the participation of volunteers and NGOs, facilitated the evacuation of people with an evacuation train

**The Health Cluster** has been established to urgently coordinate the activities of all partners under the coordination of the NTP and WHO

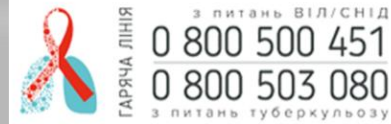
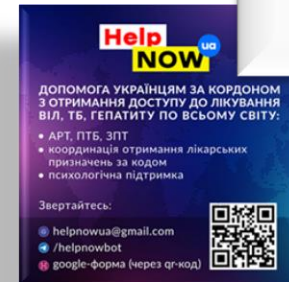
Together with the Alliance of Public Health of the NTP, a **platform was created for the urgent collection of needs of medical institutions to coordinate the activities of donors** and solve the issue of additional purchases

**The Communication Centre** was established at the NTP for crisis communications and information (it was also a platform for rapid exchange of information among partners)

Developed and implemented **a communication strategy** taking into account the challenges of war (includes information on where to turn for help to internally displaced persons and abroad, increased awareness of tuberculosis symptoms, information on psychological support for people with TB and doctors)

**The protection of the personal data of people with TB** strengthened, and data exchange was organized, developed data exchange algorithms

**Despite the organizational measures taken, it was impossible to prepare for the cynical actions of the aggressor; we could not imagine that the russian occupiers would systematically destroy hospitals, shell ambulances, and kill healthcare workers and other civilians**







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# MEASURES TAKEN TO ENSURE ACCESS TO TREATMENT

At the beginning of the war against Ukraine, the country had stocks of medicines and consumables from 6 months to a year on average **NTP worked in conditions of significant risks and complications in the procurement and logistics of medicines** (in agreements with suppliers there are a number of restrictions on cooperation in force majeure conditions, supply is complicated due to the lack of air traffic over Ukraine)

**Urgent additional purchases of medicines and diagnostic supplies** were made with the help of the Global Fund to avoid interruption of treatment

**Additional warehouses** were set up for drugs storage

At the ambulatory stage, **medicines were provided for a longer period in the first days of a full-scale war** (dispensing medicines to patients was for several months), since the delivery of medicines was significantly complicated by constant rocket attacks, and transport was limited

**Giving patients medication for a longer period of time was one of the most important decisions that contributed to the continuity of treatment and saved lives**

DOT and video support treatment was used when possible and limited

NTP faced the problem of **limited access to new short treatment regimens and the latest drugs for Ukrainian patients abroad**







## SOLUTION OF PROBLEMS RELATED TO PERMANENT LACK OF ELECTRICITY



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The Starlink **satellite communication system was implemented** - a project of the American company SpaceX to develop a high-performance satellite platform for the production of communication satellites

The system provides access to broadband Internet in the absence of a mobile and Internet connection

The advantages of Starlink are independence from terrestrial networks and high speed, but there are limitations of use related to the high cost of service (about \$75) and there are additional restrictions

Since the beginning of the full-scale invasion of the Russian army, Ukraine has received more than 42 thousand Starlink terminals. Most TB facilities were equipped with these systems

**Warm blankets, thermoses, generators, water supplies, and flashlights were urgently purchased**

Before the war, all anti-tuberculosis facilities were equipped with generators, but in the conditions of a long-term lack of electricity, **the existing generators were not enough, so modern additional generators of various capacities were purchased**

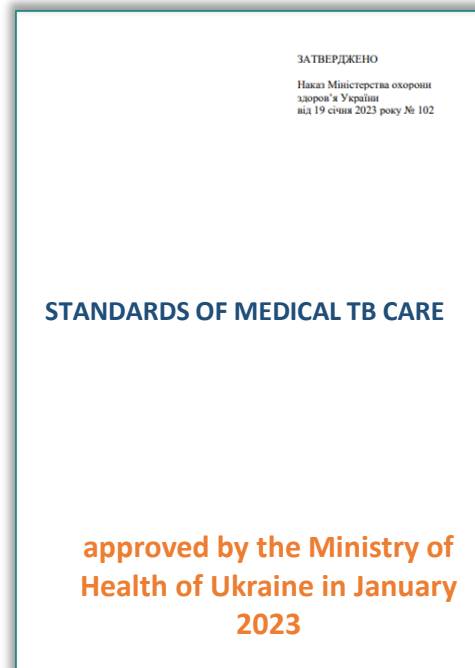
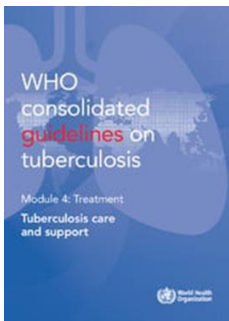
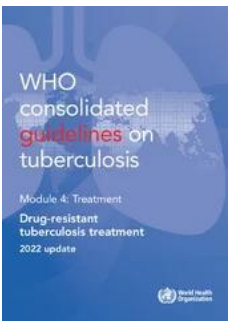
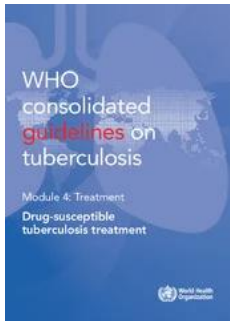
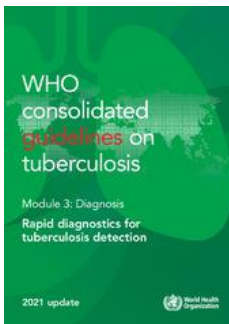
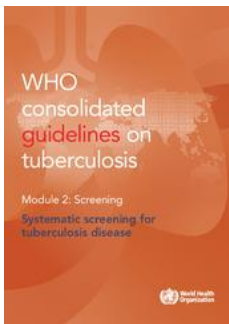
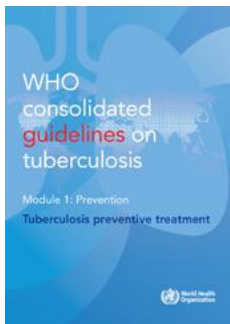
With the funds of international partners, donors, and charitable organizations, **additional power banks** were purchased for operation in conditions of prolonged lack of electricity





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# STANDARDS OF MEDICAL CARE FOR TB PATIENTS ACCORDING TO WHO RECOMMENDATIONS OF 2022



**NTP of Ukraine adapted the national standard of TB care in accordance with modern WHO recommendations, while it is important that patients, regardless of the country in which they are treated, have access to modern protocols and drugs**



# **BASIC PRINCIPLES OF TB TREATMENT IN UKRAINE AND NEW APPROACHES TO HEALTHCARE DELIVERY**

a person-centered approach is the basis for providing medical care

**outpatient treatment models prevail** (61% are treated on an outpatient basis from the first day)

**Video Supported Treatment is widely used** (more than 52 % of patients are covered, however, periodically due to Russian missile attacks, the power supply infrastructure is destroyed and the Internet access is limited)

a set of measures is being implemented to develop adherence to treatment: **social and psychological support for the patient is provided to people with TB through NGOs with the support of a Global Fund grant**

**to ensure government procurement of social services, a package of documents has been approved in accordance with WHO recommendations**, and a social procurement mechanism is additionally used

since October 2023, for the first time, a **state budget has been allocated for social support** in 6 regions out of 25

the **NTP focuses on addressing the barriers to treatment**. In order to eliminate such barriers, they are identified in operational studies, and a gender-oriented approach is used in treatment

in the conditions of bombed-out healthcare facilities, **new models of care are provided through mobile clinics using ultra-portable X-ray units, and with involvement of the civil society**





# UKRAINIAN NTP PROVIDED ACCESS TO MODERN SHORT TREATMENT REGIMES

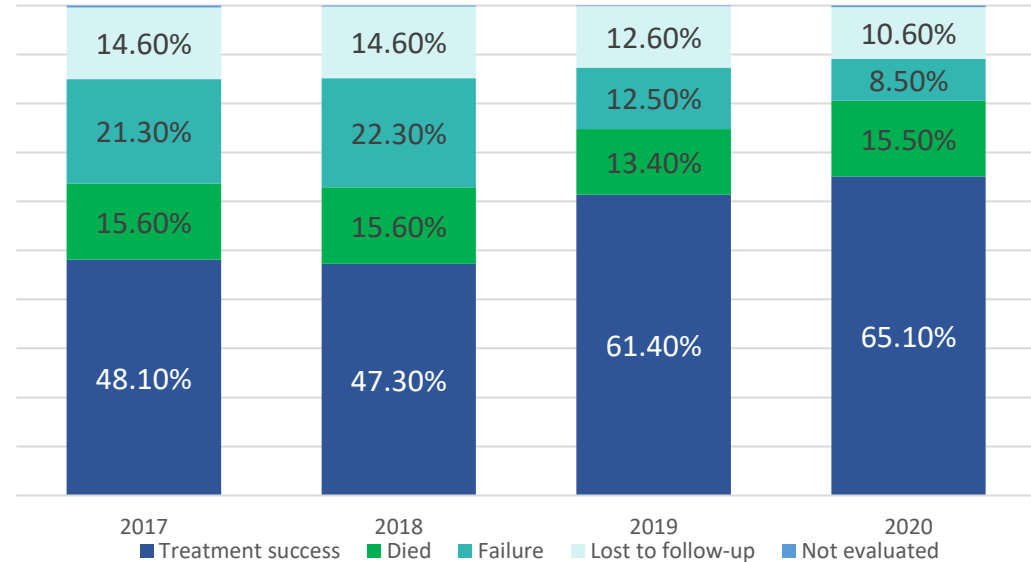
It's worth noting that the **NTP of Ukraine was actively participating in operational research projects such as modified shorter treatment regimens for RR-TB (mSTR) and BPaL**

Since November 2020 and up to October 2023, more than **3000** patients have been enrolled in mSTR and **358** in BPaL treatments, yielding promising efficacy results. This is expected to have a positive impact on the treatment success of RR-TB patients

Patients treated with shorter and **more effective regimens have shown higher treatment success rates compared to traditional longer treatment options.**

The regional cohort of mSTR, for instance, has reported a treatment success rate exceeding **76%**, and preliminary data for BPaL suggests a similarly impressive success rate of **89%**. These figures stand in stark contrast to the results of traditional longer regimens.

TREATMENT OUTCOMES OF MDR-TB CASES, 2017-2020 COHORTS



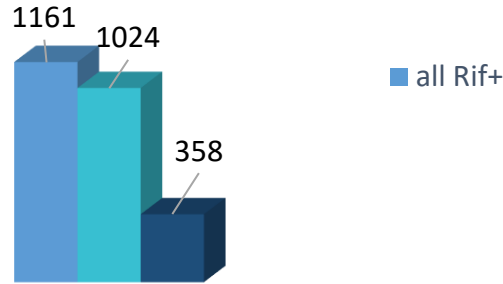
**SHORT MODERN REGIMES WHO RECOMMENDED SHOULD BE AVAILABLE TO PEOPLE WITH TB IN ALL COUNTRIES**





# PRELIMINARY RECRUITMENT RESULTS OF PATIENTS INTO THE BPAL STUDY AS OF OCTOBER 1, 2023

## BPAL screening and inclusion cascade



## Primary outcomes

Treatment success (n=272; 89,8%)

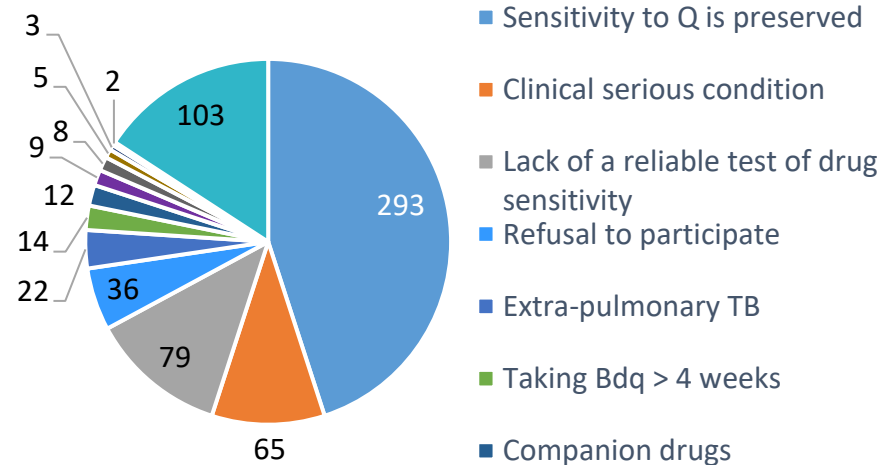
Failure (n=11, 3,6%)

Died (n=6, 2%)

Lost to follow-up (n=11; 3,6%)

Continue treatment (n=55)

## Reasons for non-inclusion



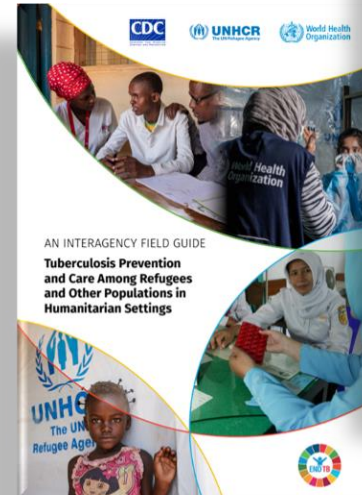
## Withdrawal (n= 3; 1%)

Baseline resistance to Lzd



# INTERNAL AND EXTERNAL MIGRATION

- ❑ WHO quickly developed a platform for data sharing between countries and a data sharing algorithm
- ❑ Research and study of barriers to access to treatment in the countries of the Euroregion were conducted and measures were taken to eliminate them
- ❑ Receiving TB treatment at the place of actual stay – recommendation developed and fully implemented in the regions
- ❑ Returning patients to medical surveillance through various applications (phone, Viber, WhatsApp, Telegram, etc.)
- ❑ Receiving TB and HIV services for the Ukrainians abroad (Standardized protocol for clinical management and medical data-sharing for people with TB and living with HIV among refugees from Ukraine was developed)
- ❑ Informing patients about the possibility of receiving HIV and TB services in Ukraine and abroad (HelpNow help24.org.ua, chat-bot ART Poruch (ART Nearby) [t.me/HIV\\_AIDS\\_bot](https://t.me/HIV_AIDS_bot); PHC website [phc.org.ua](https://phc.org.ua); online platform [findart.phc.org.ua](https://findart.phc.org.ua); HIV and TB Help Line [helpme.com.ua/ua/main/](https://helpme.com.ua/ua/main/))





## CONCLUSIONS

Ukraine continues to implement important healthcare reforms, update the regulatory framework, and demonstrate significant political commitment to WHO recommendations

The most difficult challenges for the NTP during the war were the destruction of the TB centers' infrastructure; disruption of logistics routes, migration processes among people with TB and lack of electricity and mobile communications

The staff of TB centers, healthcare and social services, and NGOs are strong, courageous, real heroes who will continue to work faithfully, even risking their own lives

Therefore, measures to improve the capacity building of human resources, motivate healthcare workers, and prevent professional burnout are essential for the NTP

Access to TB care is ensured in general, except the occupied territories and areas located in the vicinity of hostilities, but there are difficulties and limitations in access to TB services at each stage of care

Regional TB services continue to face additional risks in the context of war, most of which can be addressed through coordinated partnerships and a more tailored and flexible approach to the use of humanitarian and international technical assistance

**We are grateful to the governments of countries, international partners, EuroWHO, TB Alliance, STOP TB Partnership, the Global Fund to Fight AIDS, TB and Malaria, USAID, the GDF, MSF, Red Cross, International Medical Corps, TB People, Coalition TB, France 5% Initiative, business partners, patient organizations and international partners for their comprehensive support and assistance, which contributed to ensuring continuous access to medicines and diagnostics**

The image features a soft-focus background of a field of bright yellow flowers under a clear sky. Overlaid on this background is a graphic consisting of two horizontal brushstrokes. The top stroke is a vibrant blue, and the bottom stroke is a bright yellow. The text 'Ukraine' is written in a white, elegant cursive font across the blue stroke, while the word 'independent' is written in a blue cursive font across the yellow stroke.

*Ukraine*

*independent*