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Ukraine experience on use of digital adherence support tools and the self-assessment & planning tool

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Digital adherence technologies implementation experience in Ukraine

Background

- ✓ 2017 WHO conditional recommendation on the use of digital adherence technologies (DATs).
- ✓ 2017 National TB program (NTP) of Ukraine started video-supported treatment (VST) introduction.

Projects supporting DATs:

Years	Project	Funding	Regions involved	People with TB who used DATs	Objective
2018- 2020	TB Reach Wave 6	Stop TB Partnership	2	976 641 DS-TB 299 DR-TB	Acceptability and Feasibility
2020- 2022	Adherence Support Coalition to End TB (ASCENT)	UNITAID through KNCV	5	1,185 917 DS-TB 268 DR-TB	Research
2022- 2025	Support TB Control Efforts in Ukraine	USAID	11	3,873 2,843 DS-TB 1030 DR-TB	Implementation





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Digital adherence technologies implementation experience in Ukraine

ASCENT STUDY: Effect of digital adherence technologies on treatment outcomes in people with drug-susceptible tuberculosis

- four pragmatic, cluster-randomised trials in the Philippines, South Africa, Tanzania, and Ukraine.
- Randomized 1:1 to standard of care or intervention
- Inclusion: adult patients receiving treatment for drug-susceptible tuberculosis
- **12 170** individuals in the intervention arm analysed for the primary outcome.

Although the use of DATs did not reduce poor treatment outcomes in the four countries investigated, there is room to optimize the implementation of digital support approaches in synergy with other **comprehensive person-centered strategies** for people on TB treatment.





ASCENT oblasts participating in the study

Scale-up of the DAT intervention conducted in 2022-2024





Digital adherence technologies. Conclusions

- The COVID-19 epidemic, health reform, and the burden of the war accelerated the demand for DOT alternatives like digital adherence technologies (DATs)
- ASCENT found high user-DAT engagement rates across countries, especially for the Smart Pill Box, which was especially valuable where VST was not feasible.
- Interventions for adherence are chosen based on **people needs**, provider resources, and community support.
- Technology complements, but **does not replace**, **healthcare professionals** and faceto-face communication.

New opportunities:

Aida, a virtual TB treatment supporter - AI-powered digital treatment supporter is interactive, multi-language, and educated on TB treatment, common challenges, and overall health concerns.

• Pilot study protocol is being finalized by KNCV.



A TB doctor is refilling the smart pill box with TB drugs. Photo credit: Yevhen Astaforov. Date: May 19, 2023. Location: Poltavska Oblast Clinical TB Dispensary, Poltava, Ukraine.



ASCENT DR-TB Project

Timeline 2024-2025

Objective: Support to countries to create the conditions for successful introduction of the latest recommended shorter treatment regimens and built-up capacity to introduce any future WHO recommendations through self-assessment, gap identification and prioritizing the identified gaps for technical assistance.







Objectives of Self-assessment and planning

- Identify strengthen and achievements on the introduction of novel shorter regimens.
- Identify challenges and gaps affecting introduction of novel shorter regimens.
 - Stakeholders mapping
 - National assessment
 - Facility-based assessment
- Discuss challenges and gaps, commitment of support and development of a roadmap for tailored technical assistance (TA).





Status of standards and benchmarks

Standard	Benchmark	Met/Partially met/Not met
1. Political engagement and buy-in	<i>There is evidence of political commitment for management, prevention and care of DR-TB</i>	Met
2. Advocacy and community engagement	There is coordination on advocacy and community engagement activities at national and subnational levels	partially met
3. Drug forecasting, procurement and supply management	There is an established structure on drug forecasting, procurement and supply management	partially met
4. Diagnostics & laboratory infrastructure	The national diagnostics and laboratory infrastructure aligns with up-to-date WHO recommendation on laboratory diagnostics and algorithms	partially met
5. Human resources and staffing	There is a training and monitoring plan for human resource capacity building for management, prevention and care of DR-TB	partially met
5. Human resources and staffing	There is sufficient trained staff at the national / central level on DR-TB management	Met
6. Treatment and Care	<i>The national treatment guidelines include the latest WHO recommendations including supportive service</i>	partially met
6. Treatment and Care	The national treatment guidelines contains guidance on safety monitoring, role of expert committee and comorbidity management	Met
7. Active TB drugs safety monitoring and management (aDSM)	<i>There is aDSM guideline or included in national clinical guide with sufficient guidance on monitoring amangement of AEs</i>	partially met
8. Data management (Recording and reporting)	Quality data is available and used at various levels	partially met
9. Public-Private Mix	<i>National policies provide guidance for all providers including the private sector involved in diagnosis, prevention and treatment of DR-TB</i>	partially met
10. Enabling environment, people-centred care	The NTP and partners deploy specific initiatives to promote a person and family centred approach in prevention and care of DR-TB	partially met
11. Infection prevention and control	Core components of TB IPC are implemented in the health system	Met

Stakeholder mapping (summary)

Stakeholder	Role	
Ministry of Health of Ukraine (MOH)	Health policy, regulation, and oversight.	
Public Health Center of the MOH	The key institution of the MOH in the field of infectious disease. NTP.	
National Council on TB and HIV/AIDS	Consultative and advisory body ensuring coordinated interdepartmental and intersectoral interaction.	
Regional phthisiopulmonology centers	Diagnosis, treatment, and monitoring of DR TB. Coordination of TB services.	
Primary health care facilities	Screening, prevention, monitoring of treatment.	
Regional centers for Disease Prevention and Control	Monitoring and controlling the spread of infectious diseases.	
National Center of Phthisiology and Pulmonology (NIPP)	Principal location for scientific research. BPAL/M first operational research.	
National TB Training Hub	Capacity building institution providing training on newest TB treatment options.	
Dnipro TB Training Hub Lviv TB Training Hub	Capacity building activities and inter-region trainings.	
Key donors: Global Fund (GF), USAID	Droviding support to the NTD on various aspects such as building the capacity	
Technical Assistance Projects and NGOs / CSOs (Charitable organization "100% of Life", Alliance for Public Health (APH), Ukrainian Red Cross Society, STOP-TB Partnership. Ukraine, TB Europe Coalition, TB People Ukraine, PATH, ICF Organization for Appropriate Technology in Health)	to DR-TB services nationwide, improve early detection and diagnosis, advance quality of DR-TB management system, support civil society, TB advocacy, and stigma reduction, providing comprehensive support of patients.	

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ASCENT DR-TB Project Ukraine – self-assessment

Political commitment – national policies updated according to the latest guidelines, including key documents:

- *National strategy* on the development of TB medical care system 2024-2026.
- **Operational plan for 2024-2026** under the State strategy to combat HIV infection/AIDS, TB and viral hepatitis until 2030.
- The National TB standard is updated as of 19/01/2023, and it recommends new, shorter DR-TB regimens. In 2025 – to be updated again.

Ukraine was **one of the first countries** in the world to begin treating drug-resistant tuberculosis using the innovative **BPaL/BPaLM regimen**:

- 2022 as part of an operational research study demonstrating 90% treatment success rate;
- January, 2023 updated treatment care standard the regimen was introduced into routine practice demonstrating 88% treatment success rate.

Implementation of innovations including new short regimens for treating latent TB infection (LTBI) and TB prevention, QuantiFERON tests and new skin tests, electronic system for monitoring, sequencing technology and stool diagnostics for children, AI systems for reading X-rays, mobile ambulatory units based at Centers for Disease Control and Prevention, transition to GeneXpert as the primary diagnostic method.





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National assessment (not met – benchmark)

Theme	"Not met" benchmarks	
2. Advocacy and community engagement	 There is an evaluation mechanism to monitor the effectiveness of the community engagement campaigns. The program offers ongoing support or programming for TB survivors after they have successfully completed DR-TB treatment. There is need to expand engagement of communities to ensure multistakeholder approach on sub-national / sub-regional levels. 	
5. Human resources and staffing	 The national health system has an adequate number of trained staff on DR-TB management, prevention, diagnosis and care Training on the latest WHO guidelines for health workers at secondary and primary-level facilities has taken place Training on the latest WHO guidelines for community health workers, volunteers and treatment support groups has taken place Training on aDSM (AEs detection/recording/reporting) has been conducted for all health workers at secondary- and primary levels Community-based or civil society organizations receive training / treatment literacy in DR-TB diagnosis, treatment, and care Training is ongoing but there is need to increase coverage of trained specialists on primary health care level. 	
6. Treatment and Care	 Initiation of DR-TB treatment is decentralized (e.g. at primary care facilities) DR-TB treatment is also initiated in ambulatory settings (ambulatory treatment on day one) - with support from TB specialist TPT is initiated for all contacts of DR-TB - 79% Starting 2025, services: 1) Provision of TB prevention, diagnosis, and early detection services at primary health care level. 2) Management and treatment of adults and children with TB at primary health care level are included in the package of primary health care services. 	
4. Diagnostics & laboratory infrastructure	 TB tNGS is available at NTRL. Currently, only NGS is available at NRL. Plans to expand in 2025-2026. Easy to use/child-friendly diagnostic samples (e.g. stool) are used as part of a concurrent testing strategy to detect TB in children at all testing sites. Stool testing is used, and the concurrent testing strategy is to be included in the protocol in 2025. 	
8. Data management (Recording and reporting)	 The EHR is linked to the national TB surveillance system (such as DHIS2). Data is accessible and used Electronic systems are in use. Some technical issues arise but improvements are ongoing. NTP IT department and National Health Service of Ukraine are working towards the integration of electronic systems. 	
9. Public-Private Mix	 Guidelines for PPM activities are available and utilized A National PPM Working Group or coordinating mechanism is established Supervision activities of private health care facilities are included in the NTP action plan Private health facilities providing diagnostic services for DR-TB patients under the auspices of the NTP. Provision by the NTP of equipment and/or reagents to diagnose/monitor DR-TB cases NTP to private health facilities under the auspices of the NTP. Provision by the NTP of drugs to treat DR-TB cases to private health facilities under the auspices of the NTP. Private health facilities notify all identified TB cases to the NTP and refe. Private health facilities are eligible to deliver TB services under the package of services of the National Health Service of Ukraine. 	

Technical assistance (TA) scope – ASCENT DR-TB

Key takeaways informing the TA scope:

- Limited access to healthcare services: according to international estimates.
- **Displacement** of millions of people both within and beyond Ukraine.
- High **burden on health care staff** and system due to the **war-related challenges** especially in regions most affected by the war.
- Training on the latest WHO guidelines for health workers **primary healthcare providers** is ongoing but not yet completed.
- The National Strategy emphasizes strengthening interagency and multisectoral collaboration.

TA activities

1) Capacity-building initiatives for primary health care staff to support the implementation of decentralized approaches.

2) Foster interagency and multisectoral collaboration to ensure integrated people-centered TB care.

3) Develop oblast-specific roadmap to support the activities to end TB and strengthen sub-national level coordination mechanisms.

Project Region – Kyivska Oblast
15 local communities
located in de-occupied
territories
8% of all internally displaced
persons (IDPs) (302,000
people)
45.7 TB cases per 100,000
population





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Thank you

Together we can end TB

