

# Development of the Addiction Treatment Workforce in Ukraine by the Ukraine Addiction Technology Transfer Center

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**Citation** | Yachnik, Y., Pinchuk, I., Blyum, A., Myshakivska, O., Shults, O., Koutsenok, I., Grelotti, D. J., Larkins, S., & Johnson, K. (2022). Development of the addiction treatment workforce in Ukraine by the Ukraine Addiction Technology Transfer Center. *Adiktologie*, 22 (1), 47–52. <https://doi.org/10.35198/01-2022-001-0002>

**BACKGROUND:** The high prevalence of HIV and substance use disorders (SUD) in Ukraine remains a significant public health problem. A well-trained, recovery-oriented national workforce to enhance SUD treatment associated with HIV care is needed to reduce substance use and HIV-related burden in the country. **METHODS:** The Ukraine Addiction Transfer Technology Center (Ukraine ATTC) was established in 2017 to provide training and technical assistance on the intersection of HIV and SUD to support efforts to control the HIV epidemic in Ukraine. Data were derived from Ukraine ATTC initiatives in its first three years of operation. **RESULTS:** The Ukraine ATTC’s activities aligned with the Efficiency, Impact, Sustainability, Partnership and Human Rights action agendas of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR). A total of 985 participants took part in one

or more Ukraine ATTC activities over the three years. Activities included 443 hours of face-to-face training, 28 hours of online training, and 292 hours of post-training supervision and implementation support. Among its most significant activities, the Ukraine ATTC trained a cadre of 35 certified National Trainers (NTs) to scale up training and educational activities on HIV, SUD, and mental health throughout the country. Between 2019–2020, NTs conducted 24 Project ECHO-style trainings with 440 persons. **CONCLUSIONS:** In addition to training a large number of professionals in evidence-based practices, the Ukraine ATTC facilitated the training of others throughout Ukraine, thus expanding the reach of the evidence-based curriculum beyond its core activities. A trained workforce and curricula promote the sustainability of these efforts and serve as an important national resource.

**Keywords** | Training and Technical Assistance – Technology Transfer – Substance Abuse – Addiction Treatment

**Submitted** | 10 August 2021

**Accepted** | 9 December 2021

**Grant affiliation** | The project was funded through the PTE Federal Award No 5H79TI080578-03 “International President’s Emergency Plan for AIDS Relief Addiction Technology Transfer Centers (INT PEPFAR-ATTC)” (Sep 29, 2017–Sep 29, 2020).

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## 1 BACKGROUND

Ukraine ranks second in HIV incidence among countries in Eastern Europe and Central Asia, accounting for 9% of all new infections in the region (EMCDDA, 2016). The number of new HIV infections in Ukraine continues to grow, with cases increasing from 9,500 in 2010 to 13,000 in 2019 (UNAIDS, 2020). Ukraine has not met the 90-90-90 goals of 90% of people with HIV (PWH) to be aware of their status, 90% of people diagnosed with HIV to be on HIV antiretroviral treatment (ART), and 90% of people on ART to achieve viral suppression. Only 69% of Ukrainian PWH are aware of their status, 57% are on ART, and 53% of those treated achieve viral suppression (UNAIDS, 2020). Until more PWH are diagnosed, treated, and virally suppressed, the HIV epidemic will continue to expand in Ukraine.

The prevalence of substance use disorders (SUD) in Ukraine is also increasing. In recent decades, the number of people who use drugs has increased annually by 10–12%, with adolescents (60%) and children aged 11–14 (13%) making up a significant portion of these increases (Vlasova, 2006). The estimated prevalence of SUD in 2017 was 5.99% (Global Burden of Disease, 2017), with 1.09% of the adult population reporting injection drug use (UNODC, 2019).

Initially, the HIV epidemic in Ukraine mainly affected people who inject drugs (PWID). The HIV epidemic has subsequently generalized as a result of HIV transmission from PWID to their sexual partners. Since 2008, sexual transmission has become the main route of infection (WHO, 2014), currently accounting for 73% of new HIV cases (UNAIDS, 2018). Nevertheless, PWID make up approximately one-quarter of all new infections in Ukraine (UNAIDS, 2018). Currently, over one-fifth (21.9%) of PWID in Ukraine are infected with HIV (UNODC, 2019).

SUD treatment services in Ukraine are highly variable. Care frequently occurs in state institutions. Evidence-based treatments and medication-assisted treatment (MAT) are limited (Gluzman et al., 2018). Among PWID, 27% are on MAT (Alliance for Public Health, 2015). Only 25% of people living with HIV were on antiretroviral treatment (Ukraine UNAIDS GARPR, 2016).

Without SUD treatment, PWH and comorbid SUD are less likely to achieve HIV viral suppression and are at greater risk of HIV transmission (Blashill et al., 2015; Friedman et al., 2015; Guadamuz et al., 2014; Mimiaga et al., 2015). Treatment of both HIV and SUD improves retention in HIV care and adherence to ART, even without abstinence (Altice et al., 2011; Cunningham et al., 2011; Jin et al., 2018). Provision of MAT services to PWH and comorbid SUD can increase ART initiation and viral suppression (Altice et al., 2011; Lucas, 2011; Palepu et al., 2006; Springer et al., 2018; Springer et al., 2012). Because HIV viral suppression prevents HIV transmission, scaling up MAT is critical to achieving HIV prevention and treatment goals in Ukraine (Tan et al., 2020).

## 2 METHODS

The Ukraine Addiction Transfer Technology Center (ATTC) was established to reduce the individual and societal impacts of HIV in Ukraine by addressing the HIV and SUD epidemics. With funding from the President's Emergency Plan for AIDS Relief (PEPFAR) and the Substance Abuse and Mental Health Services Administration (SAMHSA), this partnership of the University of California San Diego (UCSD) and the Ukrainian Research Institute for Social and Forensic Psychiatry and Drug Abuse (later - Taras Shevchenko National University of Kyiv) put forth a multi-year Strategic Plan in November 2017 to build and support a well-trained, recovery-oriented, SUD and HIV workforce. Adhering to the technology transfer model (Gotham et al., 2011), the Ukraine ATTC sought to improve SUD treatment services in Ukraine, with a particular focus on HIV, by “translating” and disseminating evidence-based practices tailored to the Ukrainian context and supporting its subsequent adoption and implementation. Gotham and colleagues (2011) describe the four main elements of technology as:

### Translation:

“Explaining the essential elements and relevance of an innovation and packaging it to facilitate dissemination.”

### Dissemination:

“Promoting awareness of an innovation with the goal of facilitating adoption and implementation.”

### Adoption:

“The process of deciding whether to use an innovation.”

### Implementation:

Integration of an innovation into routine practice.

The Ukraine ATTC's technology transfer mission was aligned with PEPFAR's action agendas, i.e., Efficiency, Impact, Sustainability, Partnership and Human Rights. Data are derived from strategic planning documents, training materials, summaries of training events, and progress reports.

## 3 RESULTS

### 3.1 Efficiency

To avoid redundancy of efforts and promote transparency, oversight, and accountability, the Ukraine ATTC coordinated with multiple health service organizations operating in Ukraine that receive PEPFAR and other governmental support to address the HIV epidemic. To achieve this *Efficiency*, a strategic planning process incorporated findings from a comprehensive national needs assessment and a broad and inclusive community advisory board (CAB) comprised of key stakeholders and partner organizations. The comprehensive national needs assessment revealed an HIV workforce skills gap related to SUD screening and interventions, SUD and HIV treatment, engagement in treatment, motivational enhancement strategies, and co-occurring mental health disorders (Gluzman et al., 2018). The Ukraine ATTC worked with 130 representatives from

stakeholder organizations to 1) address policy and structural barriers to HIV epidemic control; 2) professionalize an SUD treatment workforce; and 3) build capacity through technology transfer in SUD prevention, treatment, rehabilitation, and monitoring and evaluation. The CAB's core 30 members met annually to review progress and guide its goals and activities.

### 3.2 Impact

Central to the Ukraine ATTC's commitment to *Impact* is its focus on improving the care of people with SUD with and at risk for HIV infection. Interventions targeting this population in this context could reasonably be expected to have an impact by improving HIV testing rates for this high-risk group and improving other important HIV health outcomes such as linkage and retention in HIV care, HIV viral suppression, and reduced HIV incidence. Therefore, the Ukraine ATTC oriented its trainings to link HIV and SUD care, e.g., to expand access to HIV testing and treatment for people with SUD and expand access to SUD treatment to PWH to improve adherence and retention in HIV care. Impact activities were oriented to people with and affected by HIV, including families and children, as well as key populations such as men who have sex with men, people who are transgender, and justice-involved persons. The Ukraine ATTC also expanded its training offering to include mental health as its partner organizations identified these psychosocial comorbidities as barriers to HIV epidemic control.

The Ukraine ATTC partnered with PEPFAR-funded organizations working with priority populations in priority regions of the country. Many training initiatives were organized at the request of partner organizations. They targeted the needs of a diverse workforce that intersects with people with SUD, e.g., physicians, psychiatrists and allied professionals, first responders, educators, the military, veterans service organizations, and academic faculty. Training activities were designed to enhance skills and knowledge of SUD care delivery in the context of the HIV epidemic. Additionally, the Ukraine ATTC designed and conducted specialized training for policymakers on the importance of integrating SUD and HIV care.

Over the three years, 985 participants attended Ukraine ATTC activities. In total, the Ukraine ATTC provided 443 hours of in-person education and 292 hours of post-training supervision and support. Twenty-eight hours of online education were delivered, including a two-day opening conference, 19 two-three-days trainings, two intensive five-day Training-of-Trainers sessions for the NTs, three lectures, three one-day workshops, three annual CAB meetings, and 10 online webinars. Standardized feedback forms were collected after each activity and demonstrated 94% or greater satisfaction with the quality of the trainings (content and organization), instructions, training materials and delivery, relevance and usefulness to participants' work, and success in enhancing their knowledge and skills.

### 3.3 The Sustainability Agenda

*Sustainability* was one of the Ukraine ATTC's primary goals at its inception, emphasizing capacity-building to transition to in-country expertise at the forefront. Sustainability was at the heart of two major ATTC initiatives: the National Trainer (NT) program and the adaptation and/or formation of training curricula and an online training program.

#### The NT program

In 2019, the Ukraine ATTC implemented an NT program to select a group of strategically positioned trainer of trainers from partner and stakeholder organizations. NTs were selected from non-governmental organizations funded by PEPFAR and from Ukrainian universities. Eligible persons held at least a master's level graduate degree, five or more years of experience in an HIV or SUD-related field, training experience, and a letter of support from the leadership of their organization. Fifty-five persons attended the NT training program in 2019 or 2020. Thirty-five were certified NTs after satisfactory completion of 40 hours of face-to-face trainings, video interviews with mock patients, group supervision, and at least two supervised trainings in their organization alone or in partnership with other NTs. In addition, certified NTs provided 28 trainings not funded by Ukraine ATTC to 505 persons. The established training cascade promoted the sustainability of the Ukraine ATTC's efforts, expanding evidence-based SUD care in HIV treatment and prevention settings, enhancing local capacity and expertise, and providing ongoing support to PEPFAR-related programs.

#### Training curricula and online learning platforms

Training curricula were derived from Ukraine ATTC sponsored training events or adapted from international SUD treatment and prevention resources. All materials were organized and, if necessary, translated and adapted to the Ukrainian context by Ukraine ATTC staff. Topics included fundamentals of addiction and HIV, Screening, Brief Interventions and Referral to Treatment (SBIRT), the use of validated assessment tools, motivational enhancement strategies, screening and treatment of mental disorders, case management, MAT and non-pharmacological SUD interventions, working with children, adolescents, and families, relapse prevention, key populations, training facilitation skills, behavioral health approaches to improve case identification and linkage to care, and, for NTs, strategies on mentorship.

The Ukraine ATTC supported the development of a Ukrainian language-based online educational platform for SUD, an important tool in the setting of the COVID-19 pandemic. As of August 2020, 16 webinars were conducted virtually, with continuous online trainings offered regularly.

The work of the Ukraine ATTC led to the creation of other important programs. For example, three new continuing medical education (CME) curricula were developed with the support and leadership from the Ukraine ATTC. The topics covered were based on feedback from Ukraine ATTC activities and included Motivational Interviewing, the diagnosis and treatment

**Table 1** | Distribution of training topics and TA by years of the Ukraine ATTC's activity

Topics of Trainings and Technical Assistance	Year 1	Year 2	Year 3
Training for policy makers on successful HIV epidemic control among people with substance use disorders	+		
Training for policy makers on HIV and SUD Treatment of Justice Involved Clients		+	
The current science on substance use disorders	+	+	
SBIRT	+	+	+
Motivation enhancement strategies	+	+	+
Comprehensive MAT	+		
Substance use in children and adolescents	+	+	
Addressing SUDs and HIV in key populations of MSM and LGBT		+	
SUDS and Depression		+	+
Quality Improvement in integrated HIV/SUD care		+	
HIV and SUD Treatment of Justice Involved Clients		+	+
Training of National Trainers		+	+
Introduction into Supervision in Motivation Interview			+
Amphetamine-Type Stimulants and HIV			+
Contingency Management			+

of comorbid mental and substance use disorders, and screening and brief interventions for SUD. Additionally, a pre-service educational program, “Psychiatry and Addiction Medicine,” was developed and adopted for fourth-year medical students within the Institute of Psychiatry of the Taras Shevchenko National University of Kyiv. Other virtual activities included the Ukraine ATTC email listserv and social media platforms to promote training initiatives and disseminate training materials. The Ukraine ATTC Facebook page was an especially useful tool. For example, an August 13, 2020, post had more than 4,000 views.

### 3.4 Partnership

From early on, the Ukraine ATTC mission was heavily grounded in efforts in building new and strengthening existing partnerships to expand the reach of the Ukraine ATTC mission and to enhance and/or support the services of our partner organizations. The Ukraine ATTC regarded the transfer of addiction technology as an innovation. It applied this innovation through collaborative partnerships PEPFAR-funded and other HIV-focused organizations operating throughout Ukraine to enhance SUD prevention, treatment, and rehabilitation efforts while promoting SUD and HIV services integration. It leveraged partnerships with leading international academic centers internationally and within Ukraine, as well as the broader ATTC network within the United States, Vietnam, Southeast Asia, and South Africa. Eight certified NTs are faculty of Ukrainian universities. These fundamental collaborative efforts were further enhanced by establishing and continually developing the collaboration of Ukraine ATTC with the International Consortium of Universities on Drug Demand Reduction (ICUDDR) and the

International Society of the Substance Use Disorders Professionals (ISSUP). Additionally, the Ukraine ATTC worked to expand regional partnerships and, in 2019, provided training and technical assistance in The Republic of Kazakhstan.

### 3.5 The Human Rights agenda

The Ukraine ATTC also worked to raise awareness about stigma and discrimination affecting people with SUD and other populations and to enhance the provision of non-discriminatory HIV and SUD preventive and care services. The Ukraine ATTC *Human Rights* focus included discussion of intersectional HIV- and substance use-related stigma and discrimination embedded in theories that seek to explain shared risk factors for HIV and SUD, especially among key populations, i.e., PWID, men who have sex with men, justice-involved clients, people who are transgender, and people engaging in sex work. In addition, the Ukraine ATTC advocated for client autonomy, promoting motivational enhancement and service availability, and recommending against coercive practices. People who attended Ukraine ATTC events reported improved attitudes toward issues broadly relating to human rights.

## 4 CONCLUSIONS

Aligning addiction technology transfer with PEPFAR action agendas to enhance HIV and SUD care in Ukraine, the Ukraine ATTC embarked on an ambitious three-year plan to facilitate the adoption of evidence-based SUD care in Ukraine in a manner that promotes efficiency, impact, sustainability, partnership, and human rights. As a result, the Ukraine ATTC be-

came a content leader in SUD care and treatment in Ukraine, translating and disseminating evidence-based practice in SUD and HIV care through training and curricula development. It demonstrated its commitment to Efficiency and Partnership by creating an inclusive CAB and leveraged these and other partnerships to promote the adoption and implementation of these high-impact, evidence-based SUD and HIV care and prevention practices. With a team of NTs dedicated to learning, human rights, and the sustainability of these practices, the Ukraine ATTC was a significant and unique contributor to broader national and international efforts to achieve HIV epidemic control in Ukraine and reduce the burden of the SUD and HIV epidemics on Ukrainian communities.

Although the Ukraine ATTC was only funded as a catalyst for technology transfer to address HIV and SUD care, it expanded its activities to other important areas (e.g., mental health) through collaborative efforts with its partner agencies. Funding from PEPFAR / SAMHSA ended in 2020, but the Ukraine ATTC remains an integral part of a prominent Ukrainian university. It is sustained through other sources of support, which has allowed it to easily expand its mission beyond HIV. In the future, the Ukrainian ATTC envisions scaling up the work in several directions informed by the current state-wide needs. There is a great need to bring on additional professionals into the SUD workforce in Ukraine (Petrychenko et al., 2016). The Ukraine ATTC has demonstrated the feasibility of the scale-up of SUD services through a variety of its programs, including its training, curricula, and NT program. Additional NTs are needed, Ukrainian universities need other support to expand SUD training opportunities. The tools developed by the Ukraine ATTC will be especially useful in this regard, and efforts are currently underway to offer an array of new educational programs created on the basis of the Taras Shevchenko National University of Kyiv through other universities.

As the Ukraine ATTC continues to adapt and expand its mission, its commitment to technology transfer also involves a commitment to quality improvement and accountability to defined, objective indicators of success. This was accomplished internally by tracking activities and evaluating the program's impact on persons who directly benefit from its programs. However, the Ukraine ATTC is also working to evaluate the effect of its programs at the client and population levels. The Ukraine ATTC has made important contributions to the advancement of SUD practices in Ukraine. An evaluation of benefits to Ukrainian communities as a result of the Ukraine ATTC's partnerships will further demonstrate its importance and impact.

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**Authors' contributions:** IK, IP, SL, DJG developed the Ukraine ATTC project design. YY, OM, OS performed the data analysis and participated in manuscript preparation. AB, YY developed the initial manuscript. OM conducted a literature review and summary of related work. IK, IP, SL, AB, DJG, and KJ supervised the data analysis and further editorial work

on this manuscript. All authors contributed to the article development and approved the final version of the manuscript.

**Declaration of interest:** No conflict of interest.

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