



Published in final edited form as:

Lancet Public Health. 2022 May ; 7(5): e482–e484. doi:10.1016/S2468-2667(22)00083-4.

Extending a lifeline to people with HIV and opioid use disorder during the war in Ukraine

Frederick L Altice,

Daniel J Bromberg,

Sergii Dvoriak,

Anna Meteliuk,

Iryna Pykalo,

Zahedul Islam,

Lyu Azbel,

Lynn M Madden

Section of Infectious Diseases, Yale School of Medicine (Prof F L Altice MD, D J Bromberg MSc, L M Madden PhD), Department of Epidemiology of Microbial Diseases (Prof F L Altice) and Department of Social and Behavioral Sciences (D J Bromberg, L Azbel PhD), Yale School of Public Health, Center for Interdisciplinary Research on AIDS (Prof F L Altice, D J Bromberg, L Azbel, L M Madden), Yale Institute for Global Health (Prof F L Altice), Yale University, New Haven, CT, USA; APT Foundation, New Haven, CT, USA (Prof F L Altice, L M Madden); Ukrainian Institute on Public Health Policy, Kyiv, Ukraine (S Dvoriak MD, I Pykalo MPH); Alliance for Public Health of Ukraine, Kyiv, Ukraine (A Meteliuk MPH, Z Islam MBA)

Oleksander navigates a bomb-shelled northern Ukrainian city between air raid sirens. He is on his way to the clinic to collect methadone for his opioid use disorder—a trip he has made regularly since 2016. However, this time the situation is quite different. 3 days earlier he sent his wife and children to Lviv for safety and has been living with 20 other men in the basement of his building, which doubles as a bomb shelter. Water has been disrupted and food is increasingly scarce. Yesterday, his doctor texted him a 30-min window to pick up his methadone, when emergency sirens are less common. The doctor dispenses a 10-day supply and Oleksander is relieved. He was not sure how much he would receive with the crisis worsening. Before the COVID-19 pandemic, he went to collect his methadone daily but, since the pandemic began, take-home doses have been permitted, making it easier for him to work and take care of his family. In non-occupied Ukraine, both methadone and buprenorphine are available as medications for opioid use disorder. Although grateful to receive today's supply of methadone, Oleksander asks for an increased supply, just in case

This is an Open Access article under the CC BY-NC-ND 4.0 license.

Correspondence to: Prof Frederick L Altice, Section of Infectious Diseases, Yale School of Medicine, New Haven, CT 06510-2283, USA, frederick.altice@yale.edu.

Contributors

FLA and DJB wrote the initial draft of the manuscript with input from LA and LMM. SD, AM, IP, and ZI collected testimonies from patients.

Declaration of interests We declare no competing interests.

the Russian army takes over. Even though Ukraine's Ministry of Health has just released new guidance allowing for a 30-day supply, his doctor is reluctant because he needs to keep enough for his other patients or for new patients that might be fleeing the east. His doctor is also concerned about disruptions in the supply chain and delivery of more medications for opioid use disorder.

Treatment programmes and their staff throughout the country are struggling to navigate the needs of their patients. Some doctors are reducing dosages to prolong supplies while others are dispensing what they have because they are uncertain when new medications will arrive. The consequences of a disrupted supply chain to patients are substantial. Tapering the dose every few days will result in a prolonged period of physically and emotionally uncomfortable side-effects from withdrawal symptoms. However, running out of medication abruptly will result in serious side-effects from withdrawal symptoms. In either case, withdrawal symptoms from opioids will not only accentuate the stresses and anxieties of war, but many patients could then relapse to injectable opioids, elevating their risk for overdose, skin and soft tissue infections, and transmission of blood-borne viruses such as HIV or hepatitis C virus. Approximately half of all people on methadone are also being treated for HIV,¹ and the discontinuation of methadone could result in high rates of discontinuation from HIV medications, which could accelerate progression of HIV or, in the case of ongoing HIV risk-taking, transmit HIV to others.

Oleksander began injecting opioids when he was 19 and remembers the chaos in his life until he started treatment with methadone 6 years ago. He will do anything to ensure he never again endures the struggles of his previous life. He feels reliant on his methadone, much like a diabetic is tied to their insulin. He notes that even friends with diabetes are concerned about their next dose of insulin, but he emphasises that insulin is not as highly regulated as methadone, making it more palatable to doctors to dispense more extended take-home supplies.

Oleksander, unlike his wife and two children, has no way to leave. He is of conscription age and cannot cross the border. Because he is dependent on opioids, Oleksander feels unsuitable for the army. Individuals who are dependent on opioids and who have other comorbid disabilities can be officially certified as disabled by a specialised doctor and are exempt from conscription. However, this exemption is seldom used and access to this service is uncertain during war. When asked about moving west to a safer region, despite the presence of a national hotline to help guide patients, he has no idea where methadone supplies exist or whether he will be treated at other methadone clinics as he is registered only in his city. The Ministry of Health allows a prescription for methadone that could be used at any private pharmacy, free of charge, but the online medications for opioid use disorder tracking system showed no pharmacies that had medication available. Medications for opioid use disorder in Ukraine are tightly regulated under Order 200 and otherwise mostly available in licensed clinics. With a 90-day supply of his HIV medications, it is the small 10-day supply of methadone that restricts him from finding safer refuge.

Despite the ongoing conflicts in Ukraine since 2014, no disaster plan has ever been in place for patients such as Oleksander. Oleksander's current situation is complicated due to his

requirement for treatment for an opioid use disorder, his HIV infection, and living within a war zone. When such disasters occur, the rigid treatment requirements for methadone delivery often become impossible to maintain amid unpredictable chaos. With 3·5 million Ukrainians having left the country and millions more displaced internally due to the current war, there is untold military and humanitarian need, resulting in treatments such as methadone becoming quickly deprioritised. The allowance of 30-day take-home dosing and using prescriptions to pick up medications for opioid use disorder are a first step; however, there is no uniform response throughout the country, leaving the treatment plan to local physicians and administrators. Treatments such as methadone (and the people who require them) are highly stigmatised and this stigma is seldom reduced in a crisis setting. Moreover, taking medications for opioid use disorder improves adherence to taking HIV medications,¹ making it doubly important to continue medications for opioid use disorder beyond the 30-day allowance. The Ukrainian people have been extraordinarily resilient in response to the current war; however, the impact on patients such as Oleksander are potentially profound. Although Oleksander's situation is unimaginable, his friend Iryna (who is also on methadone and pregnant) is facing an even greater challenge. Oleksander's friends are of the opinion that going "cold turkey" (a term often used by people with opioid use disorder to describe the agonising symptoms of abrupt withdrawal from opioids) from methadone is worse than from heroin if his supply is interrupted, but Iryna knows that withdrawal from opioids could result in spontaneous abortion.

An effective and immediate response is urgently needed. The first step is the creation of an effective real-time strategy for patients to be able to track down supplies of methadone within the country. There is a smartphone application (app) that provides a list of sites providing medications for opioid use disorder, HIV, and tuberculosis services, but it requires a smartphone and would need to be modified to provide real-time information on which sites have adequate supplies. For those without a smartphone, there is a bot on the Telegram messaging service that links to the same information. One short-term solution would be to use the dedicated Telegram channel or enhance the current app to allow for patients and doctors to receive real-time information to coordinate the logistics of receiving treatment in any place in the country. For patients who flee the country to Moldova, where Ukrainian patients can be readily re-linked to care, such strategies can optimise methadone treatment continuity. For those who flee to other countries where methadone is more limited or who become refugees in remote rural settings, logistical considerations will be needed to accommodate them, which might be challenging since methadone delivery is often tightly controlled.

Crowd sourcing, the process of aggregating crowd wisdom to solve a problem, is another potential community-based strategy to improve access and delivery of medical services.² Given pressing time constraints, existing crowd sourcing solutions are commendable and need to be expanded. Because a patient is registered at a specific clinic, there is no current system to allow patients to move between them and continue treatment. In the current system, a patient transferring to a new clinic must be referred from one clinic to the other. Such a system does not work during the chaos of a disaster. One potential short-term solution to support patients and treatment programmes is to use the national SyReX database that lists all patients who have ever received medications for opioid use disorder and uses

a unique identifier that can be quickly verified. This database, funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and operated by the Alliance for Public Health³ could be leveraged to assist transfers by allowing clinics or pharmacies to obtain minimal information from the presenting patient, use it to generate the unique identifier, and then speak to someone maintaining this database to confirm previous treatment. Because this database is only updated quarterly, it cannot confirm the last date the patient received medication from the clinic, nor the last dosage provided, but could verify eligibility for treatment and expedite dispensing for patients within Ukraine and potentially for refugees who leave Ukraine.

Next, ensuring a sustainable supply chain is crucial. Beyond the described communication methods, there are other potential strategies to be considered. The central supply of methadone is located near Kyiv, which is under siege. This large supply must be moved to a more secure location in western Ukraine. Medications for opioid use disorder are produced in factories in Kharkiv and Odesa where there is a large amount of shelling. Both factories have already been closed. Existing supplies must be safely transferred to a new storage site.

In the absence of local production, securing adequate medications for opioid use disorder from outside Ukraine immediately as humanitarian aid (or purchased using GFATM sources) is crucial. The import of such medications must address logistical constraints including importation and storage near the western Ukraine border. Once available, supply chain networks for medications for opioid use disorder must be established. The current rigid regulations require transportation in an armoured car with two security personnel, and removing this requirement might be necessary, but must be balanced with concerns of safety during medication transport. For cases in which ground transportation is either unsafe or impossible, drones could be used for the delivery of essential medications such as those for opioid use disorder and medical supplies. A 30-day supply of medication for a clinic with 250 patients prescribed an average dose of 100 mg daily would weigh 21 kg. Given the costs of war, affordable drones could make deliveries to the most dangerous settings. Patients could be advised of the delivery of new medication using closed social media chatrooms or be disseminated using crowd sourcing, given the uncertainties of delivery as fighting intensifies.

As patients become increasingly uncertain about opioid use disorder medication supplies, there are potential ways to transition patients off methadone. The preferred taper off methadone is typically prolonged, usually over weeks to months, using reductions of 5 mg every few days at a maximum. If adequate supplies of buprenorphine can be imported, low-dose buprenorphine can be used to comfortably transfer patients to buprenorphine (sometimes inaccurately described as micro-dosing),⁴ after which they can be tapered completely off medications for opioid use disorder. Therefore, planning for the import of buprenorphine is important, should methadone become completely unavailable. Transfer off medications for opioid use disorder should only be considered if there is no way to extend treatment, because this might result in relapse to drug injection and death by opioid overdose or suicide.

The harsh reality learned from the annexation of Crimea serves as a sharp reminder of what could come if Russia overwhelms the Ukrainian army. In 2014, Russia abruptly discontinued methadone within 10 days of occupying Crimea for more than 800 stabilised patients on methadone. Although more than 200 patients were emergently relocated to mainland Ukraine and continued treatment,⁵ more than 10% of those who did not receive care in other regions died soon afterwards, mostly by overdose and suicide.⁶ This could become the fate of more than 17 000 patients currently on medications for opioid use disorder in Ukraine, with half of these also having HIV. As was the case in Russia and Crimea after the banning of medications for opioid use disorder, HIV transmission would be expected to increase in Ukraine. Such increases would undermine the hard-fought successes of the past decade in Ukraine, the country with the highest adult HIV prevalence in Europe (1.2%) with an epidemic concentrated among people who inject drugs, most of which are opioids. Data from Ukraine confirm that medications for opioid use disorder successfully improve the HIV treatment cascade,¹ including diagnosis, antiretroviral therapy, and viral suppression, all of which improve both individual health and public health by substantially reducing transmission to others.

Since the invasion of Ukraine, most adult men younger than age 60 years cannot leave the country unless they have substantial dependent care responsibilities or have an official exemption for a medical reason. For those on methadone who enlist, there is extra need to ensure medication continuity because failure to do so will render them physically incapable of fighting and put them at greater risk of harm while in combat. For those Ukrainian men who are medically disabled, new mechanisms are needed to legally certify their disability, perhaps using telemedicine, along with safe passage out of the country and linkage to medications for opioid use disorder outside of Ukraine. In the worst-case scenario should Ukraine not prevail over Russia, there should be a strategy to expatriate all patients requiring methadone to nearby countries in Europe that provide medications for opioid use disorder and facilitate their continuity. Many women on methadone reported not leaving the country because of uncertainties about methadone continuity if they relocate to different countries. A clear path to continuity of medications for opioid use disorder in Ukraine and for refugees who flee to neighbouring countries must be developed, including enough supplies to continue with their medication while crossing the border and selecting housing that is proximate to medications for opioid use disorder care. Neighbouring countries have not yet ensured a sufficient supply of medications for opioid use disorder, should a large proportion of the 17 651 people on medications for opioid use disorder enter their country.

We are in the middle of an evolving humanitarian crisis that was previously unimaginable. We will be defined by our response to it, especially for the most vulnerable. The challenges encountered during a disaster, as all the most challenging problems converge, will have the greatest impact on those most vulnerable. These issues are predictable and, although some solutions seem unlikely due to economic or logistical constraints, some of them could be implemented immediately and improved through collaborative learning among the many stakeholders, inclusive of patients themselves who often have the most to lose.

Acknowledgments

We acknowledge support from the National Institutes of Health, including the National Institute of Drug Abuse, National Institute of Allergy and Infectious Diseases, and the National Institute of Mental Health. Many personal stories were collected by SD, IP, AM, and ZI to guide the needed response for Ukraine. All personal names in the manuscript have been changed to protect the anonymity of the patient.

References

1. Mazhnaya A, Marcus R, Bojko MJ, et al. Opioid agonist treatment and improved outcomes at each stage of the HIV treatment cascade in people who inject drugs in Ukraine. *J Acquir Immune Defic Syndr* 2018; 79: 288–95. [PubMed: 30312275]
2. Wang C, Han L, Stein G, et al. Crowdsourcing in health and medical research: a systematic review. *Infect Dis Poverty* 2020; 9: 8. [PubMed: 31959234]
3. Farnum SO, Makarenko I, Madden L, et al. The real-world impact of dosing of methadone and buprenorphine in retention on opioid agonist therapies in Ukraine. *Addiction* 2021; 116: 83–93. [PubMed: 32428276]
4. Ahmed S, Bhivandkar S, Lonergan BB, Suzuki J. Microinduction of buprenorphine/naloxone: a review of the literature. *Am J Addict* 2021; 30: 305–15. [PubMed: 33378137]
5. Kiriazova T, Dvoriak S. Ukraine: drug situation and drug policy. Strasbourg, France: Pompidou Group of the Council of Europe, 2015.
6. Carroll JJ. Sovereign rules and rearrangements: banning methadone in occupied Crimea. *Medical Anthropology* 2019; 38: 508–22. [PubMed: 30481074]