Harm Reduction Journal

RESEARCH

Open Access

Sustainability of opioid agonist therapy programmes in Belarus, the Republic of Moldova, Tajikistan and Ukraine in the context of transition from Global Fund support during 2020–2023

Raminta Stuikyte[1*], Ivan Varentsov[1], Naimdzhon Malikov[1], Sergii Dvoriak[1], Myroslava Filippovych[2], Alisher Latypov[1], Aleksei Kralko[3], Ala Iatco[4] and Catherine Cook[5]

Abstract

Background Most national programmes of opioid agonist therapy (OAT) in Eastern Europe and Central Asia are at a critical juncture for building their sustainability due to decreasing support from the Global Fund and other international HIV funders. Therefore, it is timely to identify the status, trends, opportunities and risk factors of OAT preparedness in the face of donor transition.

Methods The study assessed the OAT sustainability progress in 4 countries: Belarus, the Republic of Moldova, Tajikistan and Ukraine. The study used a comparative country case study design with qualitative methods and two data points in 2020 and 2022–2023. In total, 363 sources were reviewed and used, 83 interviews with key informants and 13 focus groups were conducted with clients, using a joint methodology and a defined Framework with three dimensions: '*Policy & Governance*'; '*Finance & Resources*'; and, '*Services*'.

Results All four countries have made improvements to increase OAT sustainability, though it varied. In 2022, Ukraine had a substantial degree of sustainability, followed by Belarus and Moldova with a moderate degree, while Tajikistan's sustainability was at moderate-to-high risk. No country achieved a high degree of OAT sustainability in any of the three dimensions measured. However, a high degree of sustainability was reported for at least one indicator in Belarus, Moldova and Ukraine: '*Medicines*'; '*Financial resources*'; '*Evidence and information systems*'; '*Service Accessibility*'; or, '*Service integration & quality*'. On average, the greatest improvement between 2020 and 2022 was seen for '*Availability & coverage*'; '*Financial resources*'; '*Service quality & integration;* and, '*Service accessibility*'. The highest risks across the countries, notably in Belarus and Tajikistan, were recorded for the indicator, '*Availability and coverage*'. Of concern is that the least progress, or even a decline, was found in '*Human resources*'.

Conclusions OAT sustainability in the 4 analysed countries remains at risk, despite progress in all countries. Managing HIV donor transition can have positive effects in addressing financial sustainability, especially inspired by Ukraine's continued progress despite economic contraction and Russia's invasion. More attention is needed to non-financial

*Correspondence:
Raminta Stuikyte
raminta.stuikyte@gmail.com
Full list of author information is available at the end of the article

aspects of OAT sustainability in donor transition planning. The directions that could have multifaceted positive influence for OAT long-term resilience and scale up for impact on drug problems include decentralisation outside of health settings and broader drug treatment financial and management transformation, together with drug policy reforms. Thus far, viable solutions for sustainability of OAT in conflict areas appear unlikely. Building OAT resilience should remain high on the agenda of national stakeholders, technical partners and donors.

Keywords Opioid agonist therapy, Methadone, Buprenorphine, Injecting drug use, Eastern Europe, Central Asia, Drug treatment, Transition, Sustainability

Background

Opioid agonist maintenance treatment, or opioid agonist therapy (OAT),[1] combined with psychosocial assistance, is the most effective modality for managing opioid dependence, recommended by the World Health Organization (WHO) [1]. OAT is also part of core interventions for preventing and managing HIV and the hepatitis C virus among people who use drugs [2–4]. Methadone and buprenorphine are part of the WHO Model List of Essential Medicines [5]. Globally, 87 countries implement OAT [6].

In Eastern Europe and Central Asia (EECA),[2] OAT remains fragile from the policy, programmatic and financial perspectives. OAT remains unavailable in the Russian Federation, Turkmenistan and Uzbekistan. In addition to legal prohibition of this treatment option, Russia's foreign policy and law enforcement are explicitly against OAT, which is significant given this country's influence in the region [7–9]. In all 12 EECA countries with OAT, this care modality was introduced with international donor support, mainly for tackling the HIV epidemic among people who inject opioids [10–12]. The leadership of state drug treatment services (called 'narcology' in those countries) and law enforcement has often resisted OAT, arguing instead that total abstinence should be the main goal [7, 13–15]. Notwithstanding severe HIV epidemics associated with unsafe drug injecting in the EECA, OAT programmes have faced the challenge of being a 'perpetual pilot project' [16] over multiple years without systemic scale-up. Currently, only Estonia, Georgia, Latvia and Lithuania fully fund OAT from domestic public resources. The scale of, and access to, OAT remains a concern. Latest available data in 2023 [17, 18] shows just one EECA country, Georgia, has achieved coverage at the WHO-recommended medium range. Furthermore, donor-funded HIV operations often involve parallel systems for procurement and the supply of health products; payments and training of staff; health information; and financing. While, in certain instances, designed and introduced under justifiable circumstances, such as widespread corruption in the respective health sector [19, 20], parallel arrangements are unsustainable and can lead to poor transition without integration into domestic systems and domestic capacity building prior to donor phase out [21].

Sustainability of health responses dependent on donor funding is a major concern, especially in the HIV field, where international support is flatlining [22–24]. The Global Fund, the major international OAT funder in the EECA region, expects a focus on sustainability and transition preparedness from all lower-middle income countries with a lower disease burden and upper-middle-income countries, including all those EECA countries eligible for such HIV financing. This focus should include enhanced transition planning, increased focus on sustainability of interventions for key and vulnerable populations and accelerated co-financing [25]. Therefore, an assessment of the OAT status in the EECA is timely to identify trends, risk factors and transition preparedness in the face of reduced international support.

Methods

This study assessed progress and risk areas in building sustainability of OAT programmes in 4 EECA countries (Belarus, Republic of Moldova, Tajikistan and Ukraine) in the context of transition from Global Fund support to public funding and systems. Based on the results, the study developed recommendations for national authorities, OAT managers, advocates, international partners and donors on maintaining and expanding OAT programmes in the new funding environment. The study used a comparative country case study design with qualitative methods and two data points in 2020 and 2022–2023.

[1] This treatment is known under different names in scientific literature, country policy documents and among practitioners, including opioid substitution therapy and medically assisted therapy; however, because of stigma and politicisation attached to the first name, and the inaccurate distinction from other approaches in the second, this article uses the term OAT.

[2] For the purposes of this article, the region of Eastern Europe and Central Asia refers to the 15 states that (re)emerged after the collapse of the Soviet Union in the 1990s and includes Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Scale	*Description*	*Approximation of the scale in percentages*	*Colour coding*
High	High level of sustainability with low or no risk	>85-100%	Green
Substantial	Substantial level of sustainability with moderate-to-low risk	70-85%	Light green
Moderate	Moderate level of sustainability, at moderate risk	50-69%	Yellow
At moderate-to-high risk	Sustainability at moderate-to-high risk	36-49%	Orange
At high-to-moderate risk	Moderate-to-low level of sustainability, at high-to-moderate risk	25-35%	Light red
At high risk	Low level of sustainability, at high risk	<25%	Red

Fig. 1 Scale used for measuring dimensions and indicators

Instrument for measuring OAT sustainability

The study utilised an OAT-specific instrument for measuring the degree of, and opportunities for, sustainability of OAT at national level. The Eurasian Harm Reduction Association (EHRA) developed the testing of this instrument during 2019–2020 [26]. The instrument offers a matrix for measurement, comprising dimensions, indicators and benchmarks. For each of the three dimensions (Policy & Governance; Finance & Resources; and Services), a set of indicators is proposed and several benchmarks are offered on how to measure progress under each indicator that utilises existing international guidance on OAT. Dimensions and corresponding indicators in each dimension are calculated using a 6-rank scale (Fig. 1).

In addition to measuring dimensions and indicators, the instrument requires the compilation of qualitative and other quantitative data to analyse trends, challenges and opportunities for improved sustainability of OAT.

National assessments

For the regional study, EHRA commissioned national assessments by implementing the instrument for measuring OAT sustainability. Country selection prioritised three countries where the instrument was piloted during 2019–2020. Moldova was added due to significant advocacy opportunities. Each in-country assessment in 2020 and re-assessment during 2022–2023 were conducted by a national consultant selected through a competitive process. Ukraine was an exception as its lead expert was part of the advisory body that supported the development of the instrument. Each national consultant was supported by a country-specific multi-stakeholder Advisory Group, except Ukraine in 2023. In all countries, validation of national results involved a national workshop and/or a review of the report by national stakeholders. EHRA provided technical support for each in-country assessment and facilitated discussion of the results with national stakeholders.

Each national assessment conducted a desk review of legal, policy, clinical and programmatic data, followed by key informant interviews and focus groups with OAT clients to triangulate data and, where needed, an expert assessment. Various entities were requested to address data gaps. Across the 4 countries and in the two time periods, 363 sources were reviewed; 83 key informant interviews were conducted; and 13 focus groups were held with OAT clients (detailed in Table 1). Two data points were collected for most data-related indicators for the Ukraine assessment during 2022–2023 – one for the status before Russia's full-scale invasion of Ukraine in 2022, and the other at the end of 2022; however, the scoring of OAT sustainability is based on the most recent data available which, in most cases, was the status after the full-scale war had started.

Compiling results for the regional study

Regional results were compiled from a total of 8 national reports that underwent validation. Hence, primary

Table 1 Cumulative number of inputs for the 2020 and 2022–2023 assessments by country

	Number of sources used in desk review	Number of key informant interviews	Number of focus groups with clients
Belarus	>100	20	-
Moldova	>63	15	4
Tajikistan	80	29	7
Ukraine	>120	19	2
Total	363	83	13

Table 2 OAT sustainability across the three dimensions measured in the four countries in 2020 and 2022–2023

Sustainability dimension	A. Policy & Governance		B. Finance & Resources		C. Services	
Year	2020	2022/23	2020	2022/23	2020	2022/23
Belarus	Moderate	Moderate	Moderate	Substantial	At moderate-to-high risk	Moderate
Moldova	Moderate	Moderate	Substantial	Substantial	Moderate	Moderate
Tajikistan	At moderate-to-high risk	At moderate-to-high risk	At moderate-to-high risk	At moderate-to-high risk	At moderate-to-high risk	At moderate-to-high risk
Ukraine	Moderate	Substantial	Moderate	Moderate	Moderate	Substantial

sources used by the respective country assessments are not referred to in this manuscript. Additionally, EHRA archived files with primary and secondary data and analysis to ensure availability and transferability of all scoring and qualitative information over time. This archiving practice was particularly helpful in one country (Tajikistan) where two different consultants conducted the assessment in 2020 and the re-assessment during 2022–2023. The country reports are available online [27–34].

Results

All four countries have made improvements to increase OAT sustainability. In 2022, Ukraine had a substantial degree of sustainability, followed by Belarus and Moldova with a moderate degree, while Tajikistan's sustainability was at moderate-to-high risk. No country received the highest value (high degree of sustainability) or received the lowest value in the sustainability measurement scale (at high risk of sustainability) in any of the dimensions and indicators.

Across the three dimensions, there is great diversity across countries (Table 2). In 2022, Belarus and Moldova achieved the highest scoring of substantial sustainability in the dimension of '*Finance & Resources*', while Ukraine was rated best, with a substantial degree of sustainability for '*Policy & Governance*' and '*Services*'.

Overall scoring of sustainability between 2020–2022 remained at similar levels in Moldova and Tajikistan, while in Belarus, and particularly in Ukraine, sustainability improved. In 2020, Moldova received the highest OAT sustainability scores, followed by Belarus and Ukraine. Tajikistan was assessed as having OAT at moderate-to-high risk across all dimensions in both years. For Ukraine, the degree of sustainability on the '*Finance & Resources*' dimension was on an improving trajectory in 2020 before the full-scale war with Russia which required the reallocation of state resources that were replaced by Global Fund support and, therefore, no improvements in this particular dimension were registered between 2020 and the end of 2022. Overall, however, Ukraine achieved the greatest progress among the four countries analysed since 2020.

Dimension of 'Policy & Governance'

The dimension of '*Policy & Governance*' comprises two equally weighted indicators: '*Political commitment*' and '*Management of transition from donor to domestic funding*'.

For the indicator, '*Political commitment*', moderate or substantial progress is recorded in all four countries. In both 2020 and 2022, OAT was strongly supported by HIV-specific and clinical drug treatment documents in all four countries, including national HIV strategic documents, and the HIV budget planning and clinical protocols on drug treatment approved by the respective Ministries of Health. However, the drug strategies and action plans, even if they explicitly mention OAT (Moldova), are not funding OAT. In Moldova and Ukraine, this indicator moved from moderate to a substantial degree of sustainability, in both cases showing a greater commitment to a public health approach in drug policy documents and commitments to scaling up. In Moldova, the Ministry of Justice initiated amendments to the Criminal and Administrative Codes in the provisions related to punishments for the use of narcotic substances, and the introduction of alternatives to imprisonment, while its parliament initiated a working group dedicated to the development of services for people who use drugs, and the Government adopted a new national HIV strategic plan (2021–2025) with the commitment to scale up OAT. Ukraine's government was to adopt a draft Strategy of the State Policy towards Drugs until 2030 with a greater appreciation of a public health approach, with adopted targets for OAT scale up, while the Ministry of Health amended the main regulatory act on OAT to increase its attractiveness for clients and providers and demonstrated

a proactive position to find solutions to increasing OAT coverage despite the COVID-19 pandemic and Russia's invasion in 2022.

While OAT has been scaled up nationally in Tajikistan and is included in the clinical and operational guidance for drug treatment, the original ministerial act on its pilot status has not been revised. Moreover, OAT is seen more as an HIV prevention intervention as well as a less advantageous option in comparison with abstinence-focused drug treatment approaches by some officials and even NGOs. The National Drug Control Strategy of Tajikistan for 2021–2030 does not mention OAT. Legislative restrictions in Tajikistan remain, limiting the rights of all clients of state drug dependence services and requiring them to join a state registry from which personal data could be used for purposes outside health needs (such as a certificate required for employment or higher education). Similarly, in Belarus, state drug dependence services are mandated by law to share their client data with law enforcement.

Concerning the '*Management of Transition from Donor to Domestic Funding*,' all four countries are planning donor transition of their HIV programmes, while each are at different stages of the transition from the Global Fund. Belarus and Moldova—being classified as upper-middle income countries—are closest to donor departure, while Tajikistan and Ukraine—as lower-middle income economies—are furthest.[3] Ukraine is the only country with an improved rating from a moderate to a substantial degree of sustainability for this indicator, mainly because of its Transition Plan, called 20–50-80, which largely reached its OAT-related objectives by the end of 2020 as the state funds OAT, both medications and services [35]. In 2022, the country had to resort to donor support for medications due to storage being in an active war zone and a major economic contraction following the Russian invasion (nearly 30% reduction in GDP in 2022 alone, according to the World Bank [36]); however, it is seen as reversable after the invasion given that OAT is included in state-assured medical guarantees. Moreover, a special multi-sectoral working group, chaired by the Deputy Minister of Health, continues to oversee the scale up of OAT, despite the active war. In 2020, Moldova had most clarity from which sources, and how, OAT will be sustained financially and programmatically; however, since then, the transition plan has expired and was seen as not needed when the new national strategic plan on HIV was adopted. The assessment found that while there was no reversal in the progress of ensuring financial sustainability of core services and medications from the national budget, plans for transition of psychosocial support have stalled. By contrast, Tajikistan is yet to approve and cost its transition plan; while OAT is nearly exclusively supported by the Global Fund together with U.S.-funded sources, there is no vision and planning as to how this will transition into state systems. According to the assessment of 2022, OAT was not a priority in Tajikistan for either the Ministry of Finance nor of other state bodies and no transition was expected for some 5 years. In Belarus, a transition plan for the Global Fund supported programme was approved in 2020, together with a costed national HIV strategy with commitments to fund OAT medications and to expand the OAT programme. This transition plan has had a multifaceted and positive influence: the development of an instrument on procedures which could unify standards and operation, likely improving the attractiveness of OAT; organising regional round tables to discuss service integration and sustainability; and more frequent dialogue between the ministries of health and interior to discuss OAT (Tables 3, 4).

Dimension of 'Finance & Resources'

Four indicators – '*Medications*,' '*Financial resources*,' '*Human resources*' and '*Evidence & information systems*' – comprise the dimension of '*Finance & Resources*'.

The '*Medications*' indicator achieved a high degree of sustainability in 2022/2023 in Belarus and Moldova, increasing from a substantial degree in 2020. In Ukraine and Tajikistan, this indicator was scored as moderate in both 2020 and 2022–2023. By 2022, methadone and buprenorphine became part of the state essential or reimbursed medicine lists in all four countries. At least one manufacturer has registered their medication in each country, though in Tajikistan it was reportedly only the liquid form of methadone that was being supplied. The score in Belarus changed since 2020 because of two factors: methadone and buprenorphine were added to the national reimbursed medicine list and, in the second half of 2022, the national procurement of OAT medicines used a domestic standard process for the first time, abandoning the previous parallel system for internationally funded products. This switch has, however, caused interruption of buprenorphine access and necessitated the temporary switch of buprenorphine clients to methadone. Similarly, Moldova improved OAT sustainability by starting to fund buprenorphine from the national health insurance budget, though reporting some challenges with limited stock due to increased price. The limitation in Moldova's sustainability is that the medications

[3] In mid-2021, Tajikistan and Moldova were reclassified by the World Bank, moving Moldova from lower-middle to upper-middle income category and Tajikistan from a low income to lower-middle income country. The estimated income level is significantly different within the categories; for example, based on the World Bank's preliminary estimates, in 2022, Ukraine's gross national income per capita was nearly 4 times higher than in Tajikistan.

Table 3 Scoring of indicators for 'Policy & Governance'

Indicator	Political commitment		Management of transition from donor to domestic funding	
Years	2020	2022	2020	2022
Belarus	Moderate (56%)	Moderate (59%)	Moderate (55%)	Moderate (50%)
Moldova	Moderate (65%)	Substantial (80%)	Substantial (71%)	Moderate (42%)
Tajikistan	Moderate (60%)	Moderate (53%)	At high risk (19%)	At high risk (23%)
Ukraine	Moderate (61%)	Substantial (77%)	Moderate (68%)	Substantial (75%)

Table 4 Scoring of indicators for 'Finance & Resources'

Indicator	Medications		Financial resources		Human resources		Evidence & information systems	
Years	2020	2022/23	2020	2022/23	2020	2022/23	2020	2022/23
Belarus	Substantial (74%)	High (78%)	Moderate (61%)	High (97%)	Moderate (69%)	Moderate (56%)	Substantial (71%)	Moderate (61%)
Moldova	Substantial (77%)	High (92%)	Substantial (79%)	High (88%)	Substantial (70%)	Moderate (56%)	Moderate (62%)	Moderate (68%)
Tajikistan	Moderate (67%)	Moderate (50%)	At high risk (13%)	At high risk (22%)	Moderate (50%)	At moderate-to-high risk (42%)	Moderate (54%)	At moderate-to-high risk (49%)
Ukraine	Moderate (61%)	Moderate (56%)	Moderate (65%)	At moderate-to-high risk (49%)	Moderate (64%)	Moderate (56%)	Substantial (78%)	High (92%)

are funded by the state only for the Right Bank of the Dniester River, without a viable plan on how to ensure access in the non-government-controlled territory on the Left Bank.[4] The United Nations Development Programme (UNDP) continues to procure methadone for Tajikistan. Buprenorphine, while being included in the List of Essential Medicines by the Ministry of Health and Demography since 2018, was yet to be used in practice. In 2020–2021, Ukraine sourced methadone and buprenorphine through international open tenders to achieve best price, while paying for them from the domestic public budget. Two domestic manufacturers were offering the best price and were chosen to procure until 2022, when one of these manufacturers, located in an active war zone, was no longer able to function. In 2022, the procurement system changed as the Global Fund and U.S. PEPFAR had to step-in to fund medicines due to a major deficit in the state budget. In 2020, Ukraine's assessment reported challenges with the supply chain – overstocking in some regions and insufficient stocks in others, without the possibility to move medicines between regions

[4] The Left Bank of the Dniester is an administrative unit of the Republic of Moldova which, since military conflict and ceasefire in 1992, has been outside the Moldovan government's control and has been governed by a Russia-backed self-proclaimed and unrecognised government.

Table 5 OAT components funded from domestic public sources in 2022–2023

OAT programme component	Belarus	Moldova	Tajikistan	Ukraine
Methadone	✓	✓		(✓ until the full-scale war)
Buprenorphine	✓	✓		(✓ until the full-scale war)
Medical services	✓	✓	Some	✓
Administrative and operating costs	✓	✓	Some	✓
Psychosocial support	Some			
OAT programme equipment	✓			
Technical support				
Advocacy				
Data and information systems (including population size estimates and sentinel surveillance)	✓	Partially (electronic register)		Partially (electronic registers and routine monitoring)

due to narcotics and stock management regulations. This changed in response to the war-related challenges, with the implementation of a more flexible, dynamic approach to the supply system which accounts for the fluctuating number of clients due to their migration and closure of some private providers.

In terms of '*Financial Resources*', as of 2022, both Belarus and Moldova stood out as the most self-reliant countries. In Moldova, universal health coverage (UHC) has been implemented that includes OAT, with people accessing it with or without a national health insurance certificate, as part of the Unified Health Care Programme. The national health insurance company covers medical services and administrative and operating costs, while the Ministry of Health covers the cost of the medication. The financial projections plan includes the doubling of the number of clients (all state funded) from 2022 until 2025 and the first funding by the self-proclaimed government in the non-government-controlled area starting from 2024 where the Global Fund has been covering the costs. The scheme also works for people who use drugs without health insurance; however, it is limited to the territory under government control. In Belarus, all narcology support is included in UHC under the list of State-guaranteed minimum social standards in health care and is funded from the general narcology budgets. Since 2015, OAT sites received public funding, while methadone and buprenorphine were still purchased through Global Fund country grants until 2022. In 2019, targeted financing of OAT medicines began from the budget of the government programme, the 'People's Health and Demographic Security in the Republic of Belarus', for 2016–2020 and for 2021–2025, i.e. medication funding remains programmatic, though they are part of the reimbursed medicine list. Even in the highest scoring countries – Belarus and Moldova – there are significant elements that continue to depend on donors and limited, if any, plans as to how these will be supported in the future, particularly in terms of indirect costs associated with OAT, such as technical support, advocacy, data and information systems, but also psychosocial support, as indicated in Table 5. The Government of Ukraine took over financing of OAT medications and care from international donors, with acceleration in 2018 when it launched its Transition Plan 20-50-80 [37]. Since 2020, OAT had been included in the state guaranteed packages of care funded through the single strategic purchaser (the National Health Service of Ukraine) and during the health reform transformations its funding method and rates changed, resulting in the loss of some smaller providers from primary care. However, Ukraine's rating of sustainability dropped in 2022 due to the Russian invasion. The war and associated destruction of infrastructure dramatically reduced the state's income and economy, not only moving the funding for medicines back to donor support but also resulting in decreased predictability of the state's economic prospects at large and its ability to fund OAT. Among the four countries, Tajikistan scored lowest for the indicator of '*Financial resources*' as its medicines and a significant portion of development and running costs come from international donors. Its assessment was confronted with major data gaps. For example, the assessment and re-assessment did not manage to identify financial data on the state contribution to OAT from the Ministry of Health and Social Protection of the Population, nor financial information on the OAT-related activities listed in the 'Implementation Plan of the National Programme to Combat the HIV/AIDS Epidemic in the Republic of Tajikistan for 2021–2025'. For example, it remained unclear which departments of the Ministry of Health and Social Protection of the Population were responsible for OAT-related measures.

In 2022, the '*Human resource*' indicator was rated at similar levels across the four countries, with a moderate

degree of sustainability in three countries and at moderate-to-high risk in Tajikistan; however, each country reported significant long-term insecurities. The initiation and management of OAT in each country requires the presence of a physician specialising in dependence treatment, who is called a narcologist or a psychiatric narcologist. Yet, there is a shortage, underutilisation and aging of these specialists to varying degrees in each country. For example, in Tajikistan, narcologists are included in the state's list of specialties with an insufficient number of experts; just 6-out-of-15 OAT sites in primary care centres have an onsite narcologist. In Ukraine, only 6% of registered narcologists were engaged in OAT as of 2017. The staffing challenge is less visible in Belarus, though it is emerging in some regions. In Moldova, refusal of the two narcologists to practice OAT led to the closure of two sites in the last 5 years as they were the only narcologists in the location. Only Ukraine has an OAT development plan to train primary care doctors in OAT provision and to expand the number of experts who can practice this approach. Moreover, Ukraine has defined standard packages and incentives for the decentralisation of OAT delivery, including primary care, which has increased the opportunities of the most accessible level of national health care system in offering OAT to their clients. In Belarus and Moldova, engaging non-narcologists and non-specialised drug treatment providers (such as health workers at primary mental health care centres in the case of Moldova) or private providers or pharmacies for the dispensing of OAT medicines is not even on the agenda. Nevertheless, all four countries reported significant investments in capacity building of health professionals directly involved in OAT that has been supported by international donors over recent years. Both the Belarus and Moldova assessments reported on active supervisory support as of 2022. In Moldova, OAT is integrated into graduate courses and a professional association is active to provide post-graduate support. However, in Belarus, Tajikistan and Ukraine, OAT mainly relies upon postgraduate courses. As the Ukrainian assessment found, OAT is mentioned in graduate studies only superficially and continues to be portrayed as an allegedly inferior approach to drug dependence management when compared to abstinence-oriented methods. Similarly, in Belarus, OAT is not fully integrated in the professional training of narcologists, nurses and infectious disease doctors. Additionally, both in Moldova and Tajikistan, OAT practitioners highlight low remuneration for staff. In the case of Moldova, while previous Global Fund-sponsored bonuses for OAT delivery for staff were removed, health workers still consider OAT as an additional duty for which they should be paid extra. In Tajikistan, donor supported incentives – linked to results – had driven the focus of practitioners to recruiting new clients, and, when unachieved, reduced the de facto payments received, which led to the low retention of staff, especially at smaller sites.

In both 2020 and 2022, Ukraine made particularly substantial progress in building their '*Evidence and Information Systems,*' including open-data M&E, an eHealth information system with confidentiality protections and locally generated research and evaluations. Belarus, too, reported strong local capacity in place for assessing OAT with one doctoral study and operational reporting by the Republican Scientific Applied Research Centre for Mental Health and ongoing digitalisation. However, the country reports a lack of studies on implementation efficiency, which is critical for the successful transition from donor support. Since 2020, the indicator's rating of the country decreased due to the impact of COVID-19 on research involving clients. Moldova remained stable for the indicator of '*Evidence and Information Systems*' with some improvements following the establishment of a register of OAT clients to improve data exchange across sites; however, as of 2022, it was still to be expanded outside the capital city. The country's last comprehensive evaluation took place more than 10 years ago. The continued challenges with analysing data, including OAT outcomes and the quality of strategic and operational OAT development, are linked to the absence of one state agency that would be charged with the development and organisational support of OAT. In Tajikistan, the electronic programme registry was put in place in 2015; however, there are no regular reports on OAT in the public domain and, out of the 8 studies related to OAT in the last 10 years, none were conducted in the last 4 years. On the positive side, all the assessed countries had increased OAT client-led monitoring and service quality assessments between 2020 and 2022. In Moldova, client satisfaction was the only study implemented in the last 3 years.

Across the four countries, the indicator '*Evidence and Information System's*' generally continues to depend on international funding and technical support.

Dimension of 'Services'

In the '*Service*' dimension, among the three indicators, the highest degree of sustainability is recorded for '*Accessibility,*' closely followed by *'Quality & integration'*, with *'Availability & coverage'* continuing to lag (Table 6).

Additionally, Table 7 provides an overview of several key benchmarks across the *Service* dimension.

For the indicator '*Availability & coverage*', Ukraine reported the greatest progress across the three indicators since 2020 and became the only country reaching a moderate degree of sustainability. This progress was driven by two developments during 2020–2022. Firstly, OAT

Table 6 Scoring of 'Services' indicators

Indicator	Availability & coverage		Accessibility		Quality & integration	
Years	2020	2022	2020	2022	2020	2022
Belarus	At high risk (8%)	At high risk (17%)	Moderate (62%)	High (85%)	Moderate (54%)	Substantial (71%)
Moldova	At moderate-to-high risk (37%)	At moderate-to-high risk (42%)	Moderate (69%)	Substantial (83%)	Moderate (66%)	Moderate (67%)
Tajikistan	At high risk (17%)	At high risk (17%)	Moderate (69%)	Moderate (57%)	Moderate (58%)	Moderate (50%)
Ukraine	At moderate-to-high risk (30%)	Moderate (54%)	Moderate (67%)	Substantial (70%)	Moderate (69%)	High (88%)

became better integrated into the broader health system, as 64% of all OAT clients received this service outside of specialised narcology institutions. The private sector became eligible to receive state funding for delivering OAT services and its increased role was duly reflected in state statistics. Secondly, in response to COVID-19 restrictions in 2020, and later due to the full-scale invasion by Russia, the uptake of take-home doses increased, and more clients became entitled to such much-needed flexibility. As a result, as of 2022, up to 92.8% of OAT clients benefitted from this approach, up from 52.9% in 2019. OAT remained unavailable in Ukrainian territories occupied since 2014 (Crimea, and parts of Donetsk and Luhansk regions) and newly occupied territories in 2022–2023. However, OAT was re-established, for example, in the Kherson region after its liberation by Ukraine's armed forces [41].

Moldova started allowing self-administration and video-observed administration of OAT in 2020 during the COVID-19 pandemic's first wave. In August 2021, the Belarus Ministry of Health allowed OAT providers to pass the medicine to in-patient clinical settings and to issue the medicine for self-administration by clients as per the new resolution, 'On medical care for clients with dependence on narcotic drugs of the opium group'. Previously, even during the COVID-19 pandemic, OAT could not be administered in hospitals and required daily site visits by clients. Tajikistan remains the only country without take-home doses as there is no specific instruction agreed between the health and interior authorities.

In all of the countries, OAT coverage is well below the level of at least 40% of the estimated number of people with opioid dependence that is recommended by WHO for preventing the transmission of HIV and viral hepatitis C. Only Ukraine shows accelerated growth in coverage with 17% of new clients enrolled in 2022, reaching 10% coverage. Moldova is the only country that has OAT across criminal justice settings, while Tajikistan offered OAT in two prisons for convicted individuals with plans signed by the Minister of Justice to expand it, and Ukraine started pilots in male and female prisons.

The *Accessibility* indicator had improved across all countries between 2020 and 2022–2023, with some important gains achieved before the studied period. Already in 2020, the four countries did not require proof of previously failed drug treatment to access this treatment modality (which used to be a common requirement at the initial stages of OAT roll-out before the period studied). Neither guidelines nor general practice automatically excludes clients because of concurrent illicit drug use in any of the countries in 2020 or 2022–2023. Pregnant women were allowed and encouraged to take OAT. In general, the minimum age of clients accepted into the programme started from 18 years in the four countries. Additionally, Belarus foresaw exceptional cases to initiate this therapy at 16 years of age, and Tajikistan allowed entry for clients under the age of 18 with parental consent. In all four countries, co-payments were largely eliminated with some exceptions remaining in Tajikistan on diagnostics needed for OAT initiation, or in Ukraine, where some clients reported the need to pay a bribe to enter the programme as of 2022. Ukraine was the only country explicitly reporting waiting lists in some facilities in 2022. Mandatory narcological registration of clients by state institutions serves as the key barrier to accessibility in Belarus and Tajikistan, while Ukraine had already eliminated this practice before 2020. In all four countries, all of the main administrative regions had at least one OAT site (except for temporarily occupied, non-government-controlled, areas). Geographic expansion between

Table 7 Selected OAT markers for the 'Service' dimension for the second data point (latest data reported in the 2022–2023 national assessments)

	Belarus	Moldova	Tajikistan	Ukraine
Population	9.2 million (2022)[38]	2.4 million (2023)[39]	> 10 million (2022)	41.2 million** (2022)[40]
Number of people with opioid dependence in state drug treatment system or registered by the system	4,579 (2020)	11,575 (all psychoactive substances) (2022)	4,749 (December 31, 2021)	n/a
Estimated number of people who use opioids (alternatively, estimated number of people who inject drugs)	73,800 and 87,000 people (2020)	12,920 (2020)	22,208 (2018)	270,800 (2022)
Medicines used for OAT	Methadone, buprenorphine	Methadone, buprenorphine	Methadone (liquid)	Methadone, buprenorphine, start of the use of long-acting buprenorphine in January 2023
Availability and coverage				
Coverage of the estimated number of people with opioid dependence or people injecting drugs	4%	5.5% (2022)	3%	9.4% [7.3% in February 2022, at the beginning of the Russian invasion]
Number of OAT clients	707 (end 2021)	590 (September 2022)	614 (December 2022)	27,432 (December 2022) [20,331 in February 2022, at the beginning of the Russian invasion]
Number of OAT sites (excluding penitentiary system)	20 (end 2021))	11 sites in 10 cities (September 2022)	15 sites (December 2022)	207 sites (end of 2022) [224 sites in February 2022, at the beginning of the Russian invasion]
Percent of administrative units with OAT	100%	29% (10 out of 34 administrative units), excluding non-government-controlled area	100%	100%, excluding the temporarily occupied territories
The share of clients receiving OAT in state specialised drug treatment or mental health institutions	100%	100%	100%	51.5%
Take-home dosages upon clinical prescription	Yes	Yes	No	Yes (provided to around 90% of all clients)
Availability in primary care and hospitals, licensed private sector and NGOs	Hospitals	Hospitals	-	Hospitals, primary care, private sector (around 27% of all clients)
Availability in penitentiary settings	Pre-trial detention only upon special approval	Pre-trial detention, 13 correctional facilities including for females	2 penitentiary institutions	Pre-trial detention; 7 penitentiary institutions (including one for females and one for juvenile offenders)

Table 7 (continued)

	Belarus	Moldova	Tajikistan	Ukraine
Quality and integration				
Recommended dosages in accordance with national clinical guidelines	Minimum 60 mg for methadone and 12 mg for buprenorphine No restrictions on maximum dosage	Methadone: 60-120 mg; Buprenorphine: 16 mg	Minimum 60 mg for methadone and 12 mg for buprenorphine. No clinical restrictions on maximum dosage; the operational guidelines recommend a maximum of 200 mg of methadone and 16-24 mg of buprenorphine	Minimum 80 mg for methadone and 8 mg for buprenorphine
Average dosage of methadone and buprenorphine based on clinical practice	Methadone: > = 60 mg Buprenorphine: > = 12 mg	Methadone: > = 50 mg by 87% clients in one site and 76% of clients in a study in 2021; Buprenorphine: 8 mg in one site and a study in 2021	Methadone: ≥ 60 mg received by 46% (data from 6 out of 13 sites)	Methadone > = 80 mg in 86% of medical facilities; Buprenorphine: > = 8 mg/day or more in 93% of facilities
Retention (% of clients on therapy for 6 months or longer)	67%	65%	65%-100% in 2022 (data from 12 out of 13 sites)	70–80% in 2022
Number of HIV or TB specialised services that provide OAT	0	0	0	21 (and 139 multidisciplinary hospitals)
Share of OAT sites with integrated care for HIV/TB/HCV	30%	27% Only 3 sites in civil sector (out of 11) integrated into a comprehensive framework and/or interacting with other services	60%	All state funded sites are expected to provide linkages to other services; 53% of OAT clients reported the availability of additional services at OAT sites

The estimate of the general population is based on the pre-war situation in Ukraine before February 2022. A more realistic estimate is significantly smaller due to the forced displacement of nearly one-third of Ukrainians, including those who had to flee the country after the full-scale war started

2020 and 2022 were reported in Belarus and Moldova. However, physical accessibility was an issue in each country with uneven geographic distribution, with the service network underdeveloped in some regions. It was particularly challenging in the countries where take-home doses were not practiced, especially when high numbers of people were in need in smaller towns and where services operated with short working hours. Physical access is acute in mountainous areas of Tajikistan bordering Afghanistan where opioid use is highly prevalent. As of the end of 2022, no mobile services were available, except for home delivery of medicines for people with mobility restrictions in Ukraine, and transportation costs are not reimbursed in any of the four countries. As of 2022–2023, OAT clients were often dissatisfied with site working hours in Belarus, Moldova and Tajikistan, with national assessments finding a great variation in operating hours depending on sites and their staffing.

Each country reported both good practices and challenges under the indicator of *Quality and integration* pertaining to the *'Service'* dimension. Ukraine achieved a high degree of sustainability, followed by Belarus with a significant degree, while in the other two countries this indicator was rated as moderate. The minimum recommended doses differ in the four countries – all set at 60 mg for methadone, except for 80 mg in Ukraine. However, for buprenorphine, Ukraine's OAT programme, which is the most experienced with this substance among the four countries, has the lowest minimum dosage (8 mg), as detailed in Table 7. No country had restrictions for increasing dosage, or for the duration of OAT. Despite the lack of ceilings for dosage, in Moldova, a survey among clients during 2021–2022 showed that three-quarters of clients were satisfied with their dosage, but another 25% thought their dosage was insufficient. In Tajikistan, the integration of OAT with HIV and tuberculosis (TB) services began in 2014 in the largest sites, where the practice of provision of antiretroviral therapy and TB medications is now continuing without additional technical support; however, financial support was cut and, therefore, sites can no longer afford to second doctors to provide a one-stop-shop for OAT, TB and antiretroviral therapies. In Ukraine, 53% of clients in one national survey reported access to other on-site services, including 34% to ART and 22% to hepatitis C treatment. In Moldova, people-centred approaches are a priority for the national health system. However, TB treatment is provided in just one OAT site, while TB preventive treatment for OAT clients was disrupted in Balti in 2020. In Belarus, social peer-led support was introduced in 2019 with NGO support; a similar service has been provided in Ukraine and Moldova for years. Ukraine takes advantage of integrating mental health screening in OAT packages. In Belarus, psychological support has been expanded from 8 consultations per client per year reported in 2019 to an average of 13 in 2020. In Tajikistan, there was a psychologist at only one site. OAT quality was reported to be uneven within the countries; it was mainly considered better, with more competent and less stigmatising staff, in larger cities. According to findings from Tajikistan focus groups and data analysis, low quality at two sites was the reason for low uptake of OAT, resulting in lower retention (65%) compared to 100% retention at some sites with good quality. In one survey in 2020 in Moldova, 27% of OAT staff preferred not to work with OAT clients and prioritised detoxification and so-called 'will-power' interventions to address drug dependence over OAT, despite national guidance. This, among other things, is reflective of high stigma of OAT among staff and in societies that has been generated over time and continues to be fuelled by, as some respondents reported, widely available anti-OAT Russian-language resources.

Areas of progress and challenges

None of the four countries reported a high degree of OAT sustainability in either of the three dimensions. However, a high degree of sustainability was reported at least for one indicator in three countries: *Medicines* (Belarus, Moldova); *Financial resources* (Belarus, Moldova); *Evidence and information systems* (Ukraine); *Service Accessibility* (Belarus); and *Service integration & quality* (Ukraine). Overall, the highest improvement between 2020 and 2022 was seen for *Availability & coverage*, *Financial resources*, *Service quality & integration* and *Service accessibility*. The list of indicators that improved reflects the advocacy efforts from experts, clients, donors and technical partners to improve services and financial transition. Two of those reported directions are the inclusion of OAT in the financing of UHC schemes and donor requirements for co-financing. Additionally, significant efforts by health professionals and organised networks of OAT clients have prioritised service improvements, which is demonstrated by the increased number of community-led research and inclusion of client perspectives in local surveys.

The greatest risks across the countries, in particular in Belarus and Tajikistan, were recorded for the *Service Availability and coverage* indicator. Those risks were exacerbated by low coverage—below 10%—in the four countries, as well as the limited availability of OAT outside public sector specialised narcology facilities and, in some countries, the ongoing low use of take-home doses. Of concern is that the least progress, or even a decline, in the *Human resources* indicator is affecting OAT sustainability.

Discussion

OAT remains at risk during transition from donor to domestic funding across the world. Globally, in 2019, only 9% of the UNAIDS-estimated funding required for OAT and other harm reduction interventions was available in low- and middle-income countries, coming in equal portions from domestic public resources and donors [37]. As the World Bank classification of income status remains the cornerstone of eligibility and the funding allocation formula for donors such as the Global Fund, countries of the EECA region, and elsewhere, are advancing closer to transition and ineligibility in the continuum of donor support.

While the four countries rolled out their OAT programme at similar times, their development pace and approach varies. OAT is increasingly recognised as part of core health care services, with state funding invested in all middle-income countries analysed; however, there is limited will to scale it up and to address the real need. All countries have clinical guidelines and leadership on OAT from the drug treatment system. Nevertheless, political support and the accountability mechanisms for scale-up and domestic investments continue to draw mainly from national HIV strategies, programmes and budgets (and not drug strategies and budgets).

Transition planning and management of the national HIV programmes have had a positive role in increasing the sustainability of OAT by presenting a vision and plan for sustaining various elements, particularly financial resources, of OAT. Furthermore, the multi-sectoral approach of HIV governance and transition can facilitate a dialogue across different ministries, including health, finance and interior. Still, programmatic and other aspects of sustainability are overlooked in donor transition planning. Some chronic challenges related to restrictive circulation of OAT medicines, limited client rights, and negative attitudes towards treatment from some health professionals remain in place some 20 years since the start of OAT in the four countries.

Ukraine has had the most significant shifts across several indicators because the country expanded service provision outside the specialised settings, with a lower threshold for service delivery and access. Remarkably, its retention of clients was among the highest among the four countries. Additionally, Ukraine was the only country reporting waiting lists of people keen to join treatment and had the highest coverage of the four states. This could be interpreted as improved integration of OAT in the broader health system and the lowering of service thresholds, positively affecting treatment demand. Thus, Ukraine's success has tapped into a broad health financing and organisational reform that has enabled significant changes in funding schemes for narcological care and enabled this integration of OAT outside of state specialised settings, not only in primary care but also with HIV, TB and hepatitis care providers and the private sector. Other enabling factors to Ukraine's progress has been having a clearly-mandated institution that is responsible for OAT development and the presence of a high-profile, open-minded, multisectoral group that has supported that development politically and technically, with open support for OAT from the top health leadership and at least some prominent law enforcement voices. Similarly, the broad health system strategies in Belarus, Moldova and Tajikistan aim to strengthen primary care and UHC. However, they are yet to break the barriers for OAT expansion through general practitioners, other non-narcological care services or the private sector.

The national HIV and TB programmes have been subject to regular systemic programmatic reviews by WHO at the request of the respective ministries of health. This scrutiny aims to improve their value for money, including their efficiency [42]. By contrast, the narcology system—where management of opioid dependence, including OAT, are just one of the functions—has not been subject to similar reviews of effectiveness and efficiency for realistic public health goals and for setting roadmaps for their reform.

The territories in active war or frozen conflicts, like those in Ukraine and Moldova, require a different timeline for donor exit and collective solutions and, in the case of OAT, might not be possible without broader geopolitical changes. For example, since 2014, when self-proclaimed Russian-backed separatists took power in parts of Eastern Ukraine, access to antiretroviral therapy (ART) and TB treatments depended on international humanitarian support. Once the humanitarian channel became unworkable and stocks ran out, in 2023, the Russian Federation started funding ART in Donetsk, reportedly subject to accepting Russian citizenship [43]. Moreover, OAT is unavailable in the non-government-controlled areas of Moldova and the temporarily occupied territories of Ukraine where Russian-installed de facto authorities replicated Russia's anti-OAT stance. Russia was quick to close OAT sites after the annexation of Crimea in 2014, resulting in the death of up to 100 OAT clients [44, 45].

The war in Ukraine deepened the geopolitical fragmentation of the region. After the full-scale invasion in 2022, some experts anticipated a reduction in political support for OAT among Russian allies, such as Belarus. However, the assessment did not observe such change. Even before the Ukraine war, Russia has proactively promoted its anti-OAT stance in the region and among its allied states. So far, no escalation of this has been observed since 2022.

This study also highlights the human resource shortages, ageing and anti-OAT views among drug treatment specialists. There is a growing recognition of, and attention to, the need to address the general human resource crises in the health sector across Europe [46]; however, thus far, this system-building block has been understated in the sustainability and transition planning and should receive greater prioritisation in the future, including for OAT sustainability building. One solution could be to follow Ukraine's example and expand its delivery outside of specialised state health settings.

The inclusion of critical stakeholders in the assessments, either in the country-specific advisory groups and/or in the validation of reports, increased ownership and use of reports and the increased attention to sustainability risks at the country level [24].

Limitations

Despite the emphasis on increasing objectivity, the country assessments had a degree of subjectivity and adaptation to various health systems and political contexts in their quantitative analyses. For example, Moldova's 2022 reassessment narrowed the review of the indicator, *'Management of transition from donor to domestic funding,'* to one aspect of OAT, that of psychosocial support which remains funded by donors, while other core services and medication provision have been funded by the government for several years. In Belarus, Tajikistan and, to some extent, Moldova, desk reviews identified only a limited amount of public information; experts with access to internal databases provided further information, or through inquiries for information, or had to rely on expert opinions. This significantly impacted the speed of the respective assessments.

While the national assessments did not seek respective ethical committee approval, the instrument development involved a multistakeholder group including a representative of the International Network of People who Use Drugs (INPUD) and WHO. Seven-out-of-eight assessments included OAT clients using their expertise to inform the design, implementation and validation of reports. In Tajikistan, in 2022, the assessment and its format, methodology and tools were formally agreed upon with the Ministry of Health and Social Protection of the Population (MoHSP) in addition to the advisory group. In 2023, Ukraine's re-assessment did not involve an advisory group; however, the results were summed-up with partners and the report went through a review process including by the Public Health Center under the Ministry of Health and the Global Fund.

Client perspectives have been included to only a limited extent. The Belarus assessments did not involve a focus group with a broader number of OAT clients due to COVID-19 related restrictions. Nevertheless, two leaders of organisations driven by people who use drugs and/or OAT clients were interviewed; hence, it relied on their knowledge, especially on differences in access to services across different regions. However, the 2022 re-assessment increased the number of OAT clients among key informants to shine a light on satisfaction with service quality and on barriers and opportunities for increased uptake. The limited number of focus groups in all countries meant that only clients from larger cities and sites were directly involved. Tajikistan was an exception and managed to engage views from smaller sites through a higher number and geographic spread of focus groups.

Conclusions

After 20 years, OAT sustainability in the four countries remains at risk and requires further planning and management. Technical partners and donors should continue supporting this work through the dual lenses of HIV and drug policy. Realistic expectations and new solutions for sustainability are needed for conflict-affected territories.

OAT programme resilience, and ability to scale up, depends on multiple factors, including political will and domestic public funding. Ukraine exemplifies the ability to address both previously documented challenges, such as rigid stock management and high specialisation of service providers, as well as new obstacles related to the country being at war and enduring a difficult economic period, demonstrating that building sustainability is not only about securing domestic funding. The increased geopolitical polarisation with the strong promotion by Russia of its anti-OAT stance will add some risks; however, thus far, Belarus is an example of significant resilience because of strong health sector leadership in OAT.

There needs to be an increased focus on programmatic elements of OAT sustainability—the resource inputs and service attractiveness (including the quality of their provision) across the four countries. The study offers a review of those needs and suggests pathways going forward. Some of the follow-up steps could benefit from cooperation and synergies with teams working on sustainability in the HIV and TB fields (such as medication procurement, UHC packages, multidisciplinary care and integration in primary settings). Transformation of drug treatment systems, including their funding methods, could facilitate more responsive and competitive provision of services. Broader reforms of national drug policies to reduce barriers to controlled medicines could have multifaceted effects on all three dimensions of sustainability and, therefore, should remain a priority for the future.

The collaborative approach to the assessments, with the engagement of key stakeholders responsible for OAT

through an advisory group, has been proven to support greater follow-up and ownership which might affect the ability of a stronger articulation of recommendations. As these countries undergo major transformations and donor transition, similar and potentially simplified assessments may need to be planned. Additionally, while COVID-19 had greatly impacted national health systems, the pandemic also enabled the adoption of measures to ensure greater accessibility of services. This could be seen as an opportunity for continuing the dialogue for more accessible, sustainably resourced and politically-backed OAT.

Finally, the time has come for OAT to be considered for provision outside of specialised drug treatment settings. As Ukraine's example shows, such decentralisation can contribute to good health outcomes, increased demand and an expanded service network.

Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral therapy
EECA	Eastern Europe and Central Asia
EHRA	Eurasian Harm Reduction Association
GDP	Gross Domestic Product
Global Fund	Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria
HIV	Human Immunodeficiency Virus
INPUD	International Network of People who Use Drugs
MoHSP	Ministry of Health and Social Protection of the Population
NGO	Non-Governmental Organisation
OAT	Opioid Agonist Therapy
TB	Tuberculosis
UHC	Universal Health Coverage
UNDP	United Nations Development Programme
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

Acknowledgements
The authors would like to thank all experts, OAT programme activists and members of the advisory groups who donated their time and contributed to the development of the assessment reports in the 4 countries. The information presented in the article on Ukraine would not have been possible without the national consultant, Oleksandr Zeziulin, who helped with conducting the assessment in Ukraine in 2020, and Iryna Ivanchuk, Head of the Viral Hepatitis and Opioid Dependency Department, Public Health Center of the MoH of Ukraine, who contributed to the development of the report on the results of the Ukrainian assessment in 2023. The authors also would like to express their gratitude to Prof. Nick Crofts, Editor-in-Chief of the Harm Reduction Journal, for granting the authors with a waiver for this article to be published.

Author contributions
All authors discussed the concept and approach to the article. Raminta Stuikyte produced the first draft of the article. Ala Iatco, Myroslava Filippovych, Naimdzhon Malikov, and Aleksei Kralko reviewed data cited and its interpretation for the corresponding countries. Ivan Varentsov, Alisher Latypov, and Naimdzhon Malikov provided detailed review of the article. All co-authors reviewed and commented on the final draft.

Funding
United Nations Population Fund (UNFPA) and the Technical Support Mechanism of the Joint United Nations Programme on HIV/AIDS (UNAIDS) funded the development of the methodology and instrument used to conduct the assessments which results are described in the article. The sustainability assessment of the OAT programme in Belarus, Republic of Moldova and Tajikistan in 2020 were implemented with funding provided through the technical support mechanism (TSM) of the Joint United Nations Programme on HIV/AIDS (UNAIDS). The sustainability assessment of the OAT programme in Ukraine in 2020 was implemented with financial support provided by the International Renaissance Foundation. 2023 assessment reports were prepared by the Eurasian Harm Reduction Association and published as part of the regional project, 'Sustainability of services for key populations in the region of Eastern Europe and Central Asia' (SoS Project 2.0), implemented by a consortium of organisations led by the Alliance for Public Health in partnership with the charitable organization '100% Life', with the financial support of the Global Fund. The corresponding author received partial support for drafting the article from the Global Fund-financed project, 'EECA Regional Platform for Communication and Coordination', through the Eurasian Harm Reduction Association.

Availability of data and materials
The methodology and instrument used to conduct the assessments for which the results are being described in this manuscript are available online at: https://eecaplatform.org/en/oat-a-guide-for-assessment-in-the-context-of-donor-transition/. Data supporting the results of the assessments as reported in this article that can be found in: Iatco A. Republic of Moldova: Assessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. Vilnius, Lithuania: Eurasian Harm Reduction Association (EHRA), 2020. https://eecaplatform.org/en/ptao-v-moldove/. Kralko A.A., Republic of Belarus: Assessment of the Sustainability of the Opioid Agonist Therapy Programme in the Context of Transition from Donor Support to Domestic Funding. EHRA, February-April 2020. https://eecaplatform.org/en/oat-in-belarus/. Dvoryak, S, Zeziulin, A. Украина: Анализ устойчивости программ поддерживающей терапии агонистами опиоидов в контексте перехода от донорской поддержки к национальному финансированию. [in English: Analysis of the sustainability of opioid agonist maintenance therapy programme in the context of transition from donor support to domestic funding]. Kyiv, February-April 2020. https://eecaplatform.org/ptao-v-ukraine/. Latypov, A. Republic of Tajikistan: Assessment of the Sustainability of the Opioid Agonist Therapy Programme in the Context of Transition from Donor Support to Domestic Funding, EHRA, February–March 2020. https://eecaplatform.org/en/oat-programme-in-tajikistan/. Kralko A.A. Republic of Belarus: Reassessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, Lithuania, 2023. https://eecaplatform.org/en/oat-reassessment-belarus/. Malikov N (2023). Tajikistan: Reassessing the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, 2023. https://eecaplatform.org/en/oat-reassessment-tajikistan/. Iatco A. Republic of Moldova: Reassessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, 2023. https://eecaplatform.org/en/oat-reassessment-moldova/. Dvoryak, S, Filippovich, M. Ukraine: reassessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, 2023 https://eecaplatform.org/en/oat-reassessment-ukraine/

Declarations

Declarations
Ethics approval and consent to participate.
Not applicable as the manuscript does not report on, or involve the use of, any animal or human data or tissue. The results eminating from seven of the eight national level assessments summarised in the maniscript involved multistakeholder advisory groups (which included OAT expert clients) to inform the design, implementation and validation of the assessment reports. In 2023, Ukraine's re-assessment did not involve an advisory group; however, the results were summed up with partners and the report went through a review process including by the Public Health Centre under the Ministry of Health and the Global Fund. All experts being interviewed for the assessment purposes and participated in focus groups in the four countries signed informed consent forms.

Consent for publication
Not applicable as the manuscript does not contain data of any individual person in any form.

Competing interests
The authors declare that they have no competing interests.

Author details
[1]Eurasian Harm Reduction Association (EHRA), Vilnius, Lithuania. [2]Ukrainian Institute on Public Health Policy, Kyiv, Ukraine. [3]Deloitte Consulting LLP, Kiev, Ukraine. [4]Union for Equity and Health, Balti, Moldova. [5]Harm Reduction International, London E1 8AN, UK.

Received: 6 March 2024 Accepted: 30 June 2024
Published online: 16 October 2024

References

1. World Health Organization (WHO). Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence, 2019.
2. WHO, Unodc, UNAIDS technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users –,. revision. Geneva: World Health Organization; 2012. p. 2012.
3. WHO. Access to Hepatitis C Testing and Treatment For People Who Inject Drugs and People in Prisons — A Global Perspective. Policy Brief; Geneva, WHO, April 2019.
4. WHO. Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations -,. update. Geneva: WHO; 2022. p. 2022.
5. World Health Organization Model List of Essential Medicines – 22nd List, 2021. Geneva: World Health Organization; 2021 (WHO/MHP/HPS/EML/2021.02).
6. Harm Reduction International. Global State of Harm Reduction 2022. London: Harm Reduction International; 2022.
7. Safranchuk I. Russia in a Reconnecting Eurasia. CSIS, September 30, 2016. Accessed on 17 September 2023 at https://www.csis.org/analysis/russia-reconnecting-eurasia
8. Klyueva A, Tsetsura K. Strategic aspects of Russia's cultural diplomacy in Europe: Challenges and opportunities of the 21st Century, by Catellani, A., Trench, R. and Zerfass, A., Brussels: PIE Peter Lang, 2015.
9. Golichenko M, Elliott R. Drug laws and policies in four regions of Eurasia. Eastern and Central European and Central Asian Commission on Drug Policy (ECECACD). November 2021.
10. Sarang A, Stuikyte R, Bykov R. Implementation of harm reduction in Central and Eastern Europe and Central Asia. Int J Drug Policy. 2007;18(2):129–35.
11. Pates, R, Riley, D (Ed.). Harm Reduction in Substance Use and High-Risk Behaviour: International Policy and Practice. Addiction Press: ISBN: 978-1-405-18297-3, July 2012.
12. Stuikyte R. Perception of drugs in Central and Eastern Europe and Central Asia: overhaul needed. Eastern and Central European and Central Asian Commission on Drug Policy (ECECACD);2021.
13. Elovich R, Drucker E. On drug treatment and social control: Russian narcology's great leap backwards. Harm Reduct J. 2008;5:23. https://doi.org/10.1186/1477-7517-5-23.
14. Dvoryak S. Evaluation of effectiveness of drug treatment programmes in Ukraine. Heroin Addict Relat Clin Probl. 2004;6(3):33–6.
15. World Health Organization. The practices and context of pharmacotherapy of opioid dependence in central and Eastern Europe (No. WHO/MSD/MSB/04.1). World Health Organization;2004.
16. Latypov A. Opioid substitution therapy in Tajikistan: Another perpetual pilot? Int J Drug Policy. 2010;21(5):407–10. https://doi.org/10.1016/j.drugpo.2010.01.013.
17. Country reported OAT coverage for the Global AIDS Monitoring report was taken from the database of the Joint HIV/AIDS Programme on HIV/AIDS (UNAIDS) available at https://aidsinfo.unaids.org, accessed on 14 June 2023.
18. EMCDDA. 2022 Statistical Bulletin, accessed on 14 June 2023 at https://www.emcdda.europa.eu/data/stats2022_en [data for Latvia and Lithuania only as they were absent in the UNAIDS database].
19. Hrytsenko Y. Fight for life: how Ukraine is fixing medical procurement and serving patients better [Internet]. Open Contracting Partnership. 2021. Accessed on 25 February 2024 at https://www.open-contracting.org/2021/02/22/fight-for-life-how-ukraine-is-fixing-medical-procurement-and-serving-patients-better/
20. Veljanov Z, Fazekas M. Efficiency gains from anti-corruption in pharmaceuticals procurement: Analysis of 9 countries across 3 continents. GTI-WP/2023:04, Budapest: Government Transparency Institute;2023.
21. Huffstetler HE, Bandara S, Bharali I, Mcdade KK, Mao W, Guo F, Zhang J, Riviere J, Becker L, Mohamadi M, Rice RL, King Z, Farooqi ZW, Zhang X, Yamey G, Ogbuoji O. The impacts of donor transitions on health systems in middle-income countries: a scoping review. Health Policy Plan. 2022;37(9):1188–202. https://doi.org/10.1093/heapol/czac063.
22. Hirschhorn LR, Talbot JR, Irwin AC, et al. From scaling up to sustainability in HIV: potential lessons for moving forward. Glob Health. 2013;9:57. https://doi.org/10.1186/1744-8603-9-57.
23. Oberth G, Whiteside A. What does sustainability mean in the HIV and AIDS response? Afr J AIDS Res. 2016;15:1–9.
24. KFF & UNAIDS (2023). Donor Government Funding for HIV in Low- and Middle-Income Countries in 2022. Accessed on 17 September 2023 at https://files.kff.org/attachment/Report-Donor-Government-Funding-for-HIV-in-Low-and-Middle-Income-Countries-in-2022.pdf
25. The Global Fund (2023). Projected transitions from Global Fund country allocations by 2028: projections by component. February 2023 update. Accessed on 10 December 2023 at: https://www.theglobalfund.org/media/9017/core_projectedtransitionsby2028_list_en.pdf
26. Stuikyte R, Varentsov I, Cook C, Dvoriak S. Measuring sustainability of opioid agonist therapy programs in the context of transition from global fund support. Harm Reduct J. 2024;21(1):1–2.
27. Iatco A. Republic of Moldova: Assessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. Vilnius, Lithuania: Eurasian Harm Reduction Association (EHRA), 2020.
28. Kralko AA. Republic of Belarus: Assessment of the Sustainability of the Opioid Agonist Therapy Programme in the Context of Transition from Donor Support to Domestic Funding. EHRA, February-April 2020.
29. Dvoryak S, Zeziulin A. Украина: Анализ устойчивости программ поддерживающей терапии агонистами опиоидов в контексте перехода от донорской поддержки к национальному финансированию. [in English: Analysis of the sustainability of opioid agonist maintenance therapy programme in the context of transition from donor support to domestic funding]. Kyiv, February-April 2020.
30. Latypov, A. Republic of Tajikistan: Assessment of the Sustainability of the Opioid Agonist Therapy Programme in the Context of Transition from Donor Support to Domestic Funding, EHRA, February-March 2020.
31. Kralko AA. Republic of Belarus: Reassessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, Lithuania, 2023.
32. Malikov N (2023). Tajikistan: Reassessing the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, 2023.
33. Iatco A. Republic of Moldova: Reassessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, 2023.
34. Dvoryak, S, Filippovich, M. Ukraine: reassessment of the sustainability of the opioid agonist therapy programme within the context of transition from donor support to domestic funding. EHRA: Vilnius, 2023
35. Stuikyte R, et al. Independent Review of the Ukraine's Transition Plan 2018–2021. PAS Center: Chisinau, Moldova, 2022. Accessed on 01 October 2023 at: https://www.phc.org.ua/sites/default/files/users/user90/Ukraine%20TP%20review_FINAL%202-15_2023_last.pdf
36. World Bank. GDP growth (%): Ukraine. World Bank Databank. Accessed on 26 June 2024 at: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=UA
37. Serebryakova L, et al. Failure to fund: the continued crisis for harm reduction funding in low- and middle-income countries. London: Harm Reduction International; 2021.
38. National statistical committee of the Republic of Belarus. Statistical bulletin No: 26/170p «Численность населения на 1 января 2023 г. и среднегодовая численность населения за 2022 год по Республике Беларусь в разрезе областей, районов, городов, поселков городского типа» [in Russian. Population as of January 1, 2023 and the average annual population for 2022 in the Republic of Belarus by regions, districts, cities, urban settlements]. Belstat: Minsk, 2023. Accessed on 15

January 2024 at: https://www.belstat.gov.by/ofitsialnaya-statistika/solialnaya-sfera/naselenie-i-migratsiya/naselenie/statisticheskie-izdaniya/index_67489/
39. National Bureau of Statistics of the Republic of Moldova. Moldova in figures. Statistical summary. Edition 2024: Chisinau, 2024. Accessed on 24 June 2024 at: https://statistica.gov.md/files/files/publicatii_electronice/Moldova_in_cifre/2024/Moldova_figures_2024.pdf
40. State Statistics Service of Ukraine. Demographic situation in 2021. Macroeconomic indicator 12 June 2023. Kyiv, 2023. Accessed on 15 January 2024 at: https://stat.gov.ua/en/publications/demographic-situation-2021.
41. Public Health Center of the MoH of Ukraine Official statistics on the opioid substitution treatment program in Ukraine. Kyiv. 2014–2023. 2023. https://phc.org.ua/kontrol-zakhvoryuvan/zalezhnist-vid-psikhoaktivnikh-rechovin/zamisna-pidtrimuvalna-terapiya-zpt/statistika-zpt
42. Zhao F, Benedikt C, Ward K. HIV and Allocative Efficiency in Eastern Europe and Central Asia. Tackling the World's Fastest-Growing HIV Epidemic. World Bank: Washington D.C, July 2020.
43. Holt E. Difficult choices for people with HIV in the Donbas. The Lancet HIV. 2024 Jan 8.
44. Hurley R. At least 80 people have died in Crimea since Russian law banned opioid substitutes, says UN special envoy.
45. Altice FL, Bromberg DJ, Dvoriak S, Meteliuk A, Pykalo I, Islam Z, Azbel L, Madden LM. Extending a lifeline to people with HIV and opioid use disorder during the war in Ukraine. Lancet Public Health. 2022;7(5):e482–4.
46. Azzopardi-Muscat N, Zapata T, Kluge H. Moving from health workforce crisis to health workforce success: the time to act is now. ancet Regional Health-Europe. 2023;1:35.

Publisher's Note